Slap on the writs: the return of Katakis - p3

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NEW COMPUTER EXPRESS

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£99 ST

HAAIEEEE!

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EXCLUSIVE: 16-bit console shock

PC Helpers

Friendly front-ends for MS-DOS – page 13

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Express Analysis

The stories that come out of the railway sidings at Slough are rarely less than astounding and if Atari could just release product to match the quality of the pre-announcements, it'd take the world by storm.

(Seen any Atari CD-ROMs in your High Street dealers yet? What about the ultra-cheap laser printer? The price-busting Mega STs? Any of the much-vaunted blitter upgrades?)

As it is, what are we to make of the news that Atari is to take its best-selling computer, turn it into a dedicated games console, and sell it for about a third of its current price?

The first observation is that this looks clearly like an American idea. Consoles have been a bigger success in the US than in Britain, largely because there's room in the US home for a dedicated games machine.

Second, such a move probably makes sense in the US, where sales of the ST have been distinctly underwhelming. Atari may expect to sell more $199 ST games machines than it can sell ST computers.

But it seems equally obvious that such a scheme is a nonsense in the British market. Consoles gasped their last several years ago when the first enthusiasm for computers made best-sellers of the Spectrum, Vic-20 and BBC Micro. And although Sega, Nintendo and Atari claim to detect signs of life, the patient still looks distinctly comatose.

For the vast majority of computer owners, consoles represent a step backwards. Sure, you can play arcade conversions, but you can do that on a C64, an Amiga or on an ST. You can also play adventures, run graphics packages and music programs, write letters and use any of dozens of other applications. On a console, you can do none of these.

Turning the ST into a console has its points only if you've got something else to take its place. Atari hasn't. With memory chips rarer than a politician's kept promise, the Mega STs aren't going to be pouring off the production lines. The Transputer Workstation is a long way (and about £2,000) from being an ST replacement.

The ST console may be coming, but you can bet you won't be able buy one next year.

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Holidays in the sun

So keen is Tynesoft to get its games out on time that its team of programmers have been promised a week in Florida if their deadlines are met.

Fourteen programmers are currently "working round the clock" in order to complete *Superman* and *Circus Games*. They should be available later this month.

"Our bread and butter is the programmers," commented boss Colin Courteney. "But it's no good them throwing me a load of rubbish and expecting to go to Florida." Presuming that the programmers succeed Tynesoft is looking at an estimated bill of £14,000.

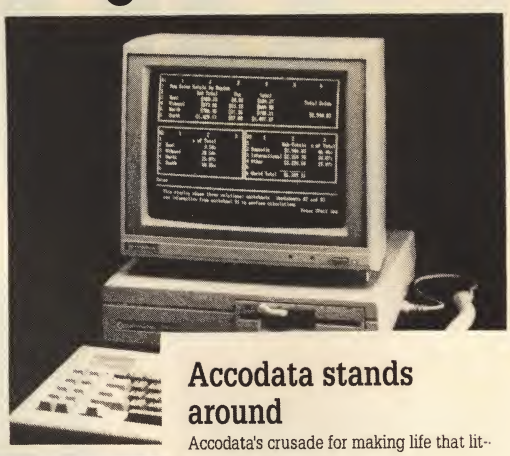
Commodore eyes students for low cost Amiga offer

Students may soon be able to buy Commodore's Amiga or one of its PCs at discount prices.

Talks are currently underway which would either offer students a 'pay after you graduate' loan or would simply make the machines available at sub retail prices. Seemingly both the Open University and the National Union of Students are involved in tentative discussions.

The offer will not differ dramatically from that made by the NUS and Midland Bank whereby students can buy up to £1,000 worth of Amstrad kit. They then simply pay interest while at college, with proper payments beginning on graduation.

The Amiga's well documented graphics capabilities appeal to art and design students as well as the powers-that-be in the Department of Education and Science. It seems likely that Commodore's ultra low cost PC1 will also be on offer. It currently retails at little over £300, making it among the cheapest PCs

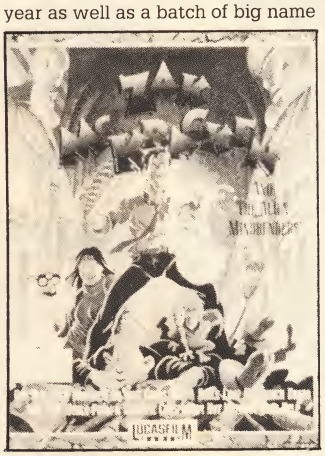


● PC1: Students deal?

Gold ties Indiana Jones

The next batch of titles from Lucasfilm Games, George Star Wars Lucas's software arm, are to be published here by US Gold.

Previously handled mainly by Activision in the UK, the US firm has geared up its development program with US Gold expecting to launch six Lucasfilm games next year as well as a batch of big name movie licences.



● Zak McKraken: leading Lucas bunch

The Birmingham company is now beginning work on *Indiana Jones: The Last Crusade*. Gold will be releasing any film titles licenced onto arcade machines including the rights to any *Star Wars* fims which might emerge.

US Gold is currently "sitting on" two titles: *Zak McKraken and the Alien Mindbenders* features an involved movie type scenario 'starring' a seedy reporter for a Sunday Sport type magazine (Zak) who stumbles across real space invaders. *Battlehawks 1942* is an air combat simulation cum arcade game based above the Pacific.

Indiana Jones goes on Cinema release here late next summer – the game should follow soon after.

Lucasfilm Games itself has recently changed its course. In the past its titles were published by the likes of Electronic Arts and Epyx in the US. Now though the firm is taking care of its own affairs.

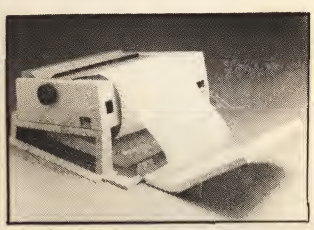
Douglas Glen of Lucasfilm called US Gold a "strong publisher" adding that he hoped to continue in the UK through that firm on a long term basis. US Gold's boss Geoff Brown unsurprisingly described the games as "terrific".

On Lucasfilm's switch from Activision to Gold he offered: "Maybe they like us better than Activision."

Accodata stands around

Accodata's crusade for making life that little bit easier continues.

The computer consumables firm has launched an £18 printer stand which incorporates essentials such as paper catcher and what is bafflingly described as "the optimum angle for ease of monitoring". Apparently foam pads also cut down noise.



● Accodata's stand: Essential?

Scan to fax

The latest addition to the growing number of handheld scanners is Kempston's Daatascan.

Costing £275 it can pick up images from newspapers, photographs, books; save them onto a DTP program on the ST and print out on an Epson or compatible printer. Daatascan images can also be incorporated onto Kempston's filofax compatible *Daatafax* organiser.

Training queues

A new series of training courses are now available through ComputerLand's 21 learning centres. Popular subjects for the moment include CAD and DTP. ComputerLand isn't promising a fun time but seemingly 6,000 people went last year.

ATARI PLANS £99 ST GAMES CONSOLE

Atari will launch a games console next year based on existing ST hardware and priced at a competition-busting price tag of £99, UK boss Bob Gleadow has told Express.

The initial launch will be at the New York Toy Fair next January, with first supplies of the console through the major high street chain stores in the early summer. However, it won't be until the autumn that the machine will be fully available.

The company is hoping that the cream of the existing ST software will be converted to cartridge format, probably not a difficult process at least for straightforward arcade games. Obviously, adventures and other games relying heavily on keyboard input will be ruled out. At present, Atari is talking about a £25 price tag for the cartridges.

"We will be launching a 68000-based console in '89," confirmed Gleadow, "but there's no point in having full distribution before September."

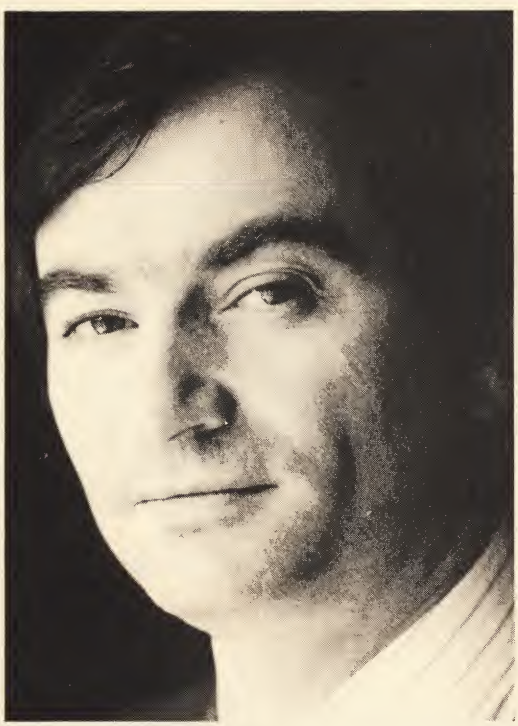
He added: "The idea is to launch it at the Toy Show and start selling to multiples in May."

The big question is why Atari should want to introduce such a system. If it's a success it can only hurt the 520ST which the company can continue selling at £299. If it isn't expected to succeed, why bother?

But Atari's move should heat up the looming 16-bit console war. Sega is also launching a 16-bit console into the UK at around the same time, and Nintendo claims that it too will offer a 16-bit model, although that won't be seen here for another two or three years.

Welsh joystick manufacturer Konix is also working on a console, reported to be due for launch in January. The firm is being secretive about developments though; when quizzed on the subject one senior employee offered: "I don't know what you're talking about."

However, several software houses have apparently seen the console, and reaction is rumoured to be very positive. Price should be just on the high side of £100, which is competitive with existing Sega and Nintendo consoles.



● Gleadow: Heralding in 16-bit console.

Microsoft saves manual labour

● CD-ROM: Programmers tool

Programmers bogged down by tons of manuals can now take heart that Microsoft is soon to launch more than 20,000 pages of reference on a CD-ROM disk.

Containing 48 books and technical publications the disk is apparently indexed and cross referenced for fast retrieval. All material can be copied directly into programs without rekeying.

Microsoft says that such a device is essential for todays programmer who is juggling a plethora of languages and environments. It currently retails at $395 Stateside. When it will be launched here is not yet clear.

Books contained on the compact disk include *Inside OS/2*, *Programming Windows*, *The MS/DOS Encyclopaedia* and *Proficient C*.

An Alternative winter pastime

With the cold and grey winter months approaching it only seems logical that the best thing to do is...play cricket.

Audiogenic's long-time meisterpiece *Graham Gooch's Test Cricket* is due out from Alternative at £1.99. Alternative reckons the game will go down a treat given that Gooch himself is leading our world renouned cricketers toward a glorious tour of India.

Well, up to a point. Someone ought to tell those chaps at Alternative that the tour has been postponed indefinitely in a swirl of ugly controversy.

Katakis: One foot out of the grave

● Katakis: Recast, rewritten and re-released?

The spectre of the stifled US Gold/Rainbow Arts game *Katakis* still looms.

Seemingly US Gold is pondering releasing a new game born "out of the ashes" of *Katakis*. That title – if it appears – will be *Denaris*. Germany based Rainbow Arts is in the process of re-writing the game and presenting it to Gold which licences Arts' products for the UK.

Katakis was taken off the UK market two months ago after Activision called in its legal people claiming the game was a direct rip off of *R-Type*. Gold is cautious enough to warn Rainbow Arts that if *Denaris* resembles *R-Type* in any way it will be rejected immediately.

"Rainbow Arts sends us product and if it's good then we take it but not if it's no good," said Gold's David Baxter. "I told Rainbow Arts two months ago that *Katakis* is not a product we want to release. It needs to be re-written."

However, if *Denaris* does not resemble *Katakis* it's hard to see how Rainbow Arts can flag it as a direct descendent. "*Katakis* got a lot of publicity," explained Baxter. "It had excellent reviews presumably because it's a better a game than *R-Type*."

He added: "It's really a marketing ploy – the game Activision tried to ban..." For Activision, UK boss Rod Cousens warned that any such game faintly resembling *R-Type* would result in renewed legal action and moves would be made to take it off the market.

Stratum sprints to PPC hard disk

An internal hard disk is soon to be launched by Stratum Technology.

It is internally interfaced and powered and can apparently easily replace one of the portable's 3.5 inch disk drives. Stratum is currently beavering away to finish the Sprint 20 by the end of the year when it will cost little under £500.

Cheetah flexes muscle

Joystick manufacturer Cheetah is going into full predator mode.

Far Eastern importers are being warned that if any of their joysticks break Cheetah's patents, royalties will be sought. In particular, Cheetah is looking carefully at infra red joysticks.

Cheetah apparently paid £5,000 for such a patent (which doesn't cover normal light guns) four years ago when it launched the Ratt infra red joystick. Boss Howard Jacobson, though, is hoping that his competitors will make a success of their ventures.

"We're not going to jump in and say 'stop selling these'. I hope they sell millions and we'll go for our share of the royalties,' said Jacobson. Cheetah is currently checking with legal people how strong the patent is and which products it covers, including the possibility of it covering infra red guns.

Acorn fired up

Acorn's Archimedes is becoming increasingly popular in the most curious environments.

The latest order the firm is parading is to an artillery training centre in Ireland. Seemingly, trainee gunners get to demolish targets by working out grid references and the like on a system enticingly named the Westland Indirect Fire Trainer.

We are assured that the Archimedes also runs a full sound and graphics simulation of the shot.

Archimedes gets a Basic boost

BBC Basic V on the Archimedes is no slouch, but like all interpreted Basics it hardly allows you to get the most from the machine. Dabs Press has a welcome solution in the form of *ABC* – the *Archimedes Basic Compiler*.

ABC will take a standard Basic V program and compile it to a stand-alone machine code file. Dabs claims almost complete compatibility with existing Basic syntax, so programs can be tested and debugged in the interpreter before compilation.

The crucial factor, though, is speed and ABC appears to do the business: Dabs is claiming increases in execution speed of up to 4000%, with most benchmarks running between 10 and 30 times faster. If you need more speed, ABC allows the use of in-line assembler within programs.

Written by Paul Fellows, head of the team responsible for Arthur, *ABC* will be available from next week, at a price of £99.95 inc VAT.

ARCADE ACTION FOR RAINBOW ARTS

Another software house has decided to try its hand at arcade machines.

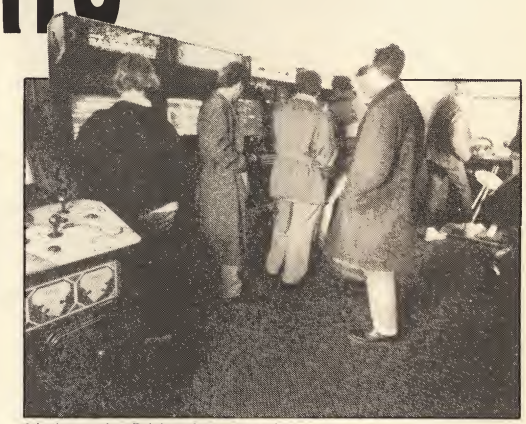
Following MicroProse's moves into that area in late summer German publisher Rainbow Arts is set to launch three arcade machines. They should be set up here by the middle of next year.

And the games will be appearing on popular home computers – including PCs – by Christmas '89 through US Gold. Gold though is not involved in the arcade machine venture directly.

Apparently tha hardware has already been developed. Rainbow Arts is keen to stress that it is not based on machines such as the Amiga or ST as has been the case with one other arcade machine manufacturer.

First out will be a "*Ghosts and Goblins* type game" called *Dark Chamber* followed by *Monster Olympics* – a comic style sports affair. The third game has yet to be named.

"We've tied up good graphics and games designers for this," commented managing director Mark Ullrich. "They've done games such as *Giana Sisters* and *Garrison*."



● In the arcades: Rainbow Arts to move in

On the software releases Ullrich commented: "We want the games to become popular in the arcades before we release computer versions."

Rainbow Arts expects to have 2,000 machines in place throughout Germany of each game. A similar number can be expected for the UK.

CHART ATTACK

TOP TEN full price

				SPECTRUM	C64	ST	AMIGA	PC	BBC	ATARI	MSX	C16	AMS CPC
1	*1*	Daley Thompson's Olympic Challenge	Ocean	●	●	●	●						●
2	*4*	Starglider 2	Rainbird			●	●						
3	*3*	Football Manager 2	Addictive	●	●	●	●	●					●
4	*N*	Elite	Firebird	●	●	●		●	●		●		●
5	*8*	Out Run	Sega/US Gold	●	●	●							●
6	*6*	Barbarian 2	Palace		●								
7	*5*	Track Suit Manager	Goliath	●	●								●
8	*R*	We Are The Champions	Ocean	●	●								●
9	*7*	Gold Silver And Bronze	US Gold	●	●								●
10	*2*	1943	US Gold	●	●								●

Italics – last weeks position

TOP TEN budget

1	*1*	Bomb Jack	*Encore*
2	*2*	Joe Blade 2	*Players*
3	*7*	Ace Of Aces	*Kixx*
4	*3*	Gauntlet	*Kixx*
5	*R*	Frank Bruno's Boxing	*Encore*
6	*4*	Air Wolf	*Encore*
7	*8*	European Five A Side	*Firebird*
8	*R*	Yogi Bear	*Alternative*
9	*6*	ACE	*Cascade*
10	*5*	Battleships	*Encore*

Italics – last weeks position

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Amstrad in the Looking Glass

LITTLE MORE THAN A MONTH AFTER ITS LAUNCH THE PC200 SINCLAIR PROFESSIONAL IS STILL SOMETHING OF AN ENIGMA TO HORDES OF GAMERS AND AMSTRAD WATCHERS. COLIN CAMPBELL TALKS TO THE LEISURE SOFTWARE HOUSES AND FINDS OUT HOW ENTHUSIASTIC THEY ARE...

The chin wagging brigade is up to its old tricks.

Amstrad's legions of self appointed experts and analysts have spent the last month or so babbling about the new beast – the Sinclair Pro or PC200 (depending on whichever name you prefer).

Not least among these prognosticators are the games publishers. They have the task of deciding whether or not Amstrad's curious beast is about to open up a glorious era of PC gaming.

A whole swathe of new computer users keen to spend lots of money on a format which has hitherto restricted itself mainly to the comparatively dull world of spreadsheets and such may be emerging.

At least that's the theory in this island. Elsewhere in the big bad world the PC format has long been regarded as the status quo for games.

So are the publishers ready to deploy all their games onto PC terrain? The obvious answer to that is yes.

Established PC owners (at least Amstrad ones) will know there's already a fair splattering of games available. By all accounts though they are dominated by the mature and thought provoking types with flight simulations riding highest.

But those eyeing the PC 200 as a real possibility (for gaming) can rest assured that even the more puerile titles so beloved of the British gamer will turn up on the PC eventually

Atlantic goal

From the software house's perspective the current situation is simple. There is a big market across the Atlantic for PC games so titles likely to appeal to Americans get transferred to PC anyway and hauled off. And US companies (EA, Mediagenic, Epyx, MicroProse et al) write all their games for the PC anyway and ship most of them over here.

Like many hardened gamers though the powers that be in the software house's top floor offices have their doubts about Amstrad's latest.

Firstly, it's the same price as an ST and palpably not as appealing as a games machine. Those currently staring balefully at their Spectrums and 64s are more likely to trade up to an ST or Amiga than a four colour Amstrad PC.

Secondly, there are now nine different Amstrad PCs between £300 and £600 (three PC200s, three 1512s, two 1640s and the low end 2086). That's not including the four versions of the portable within those parameters.

Thirdly, nobody in the know is at all impressed with the CGA monitor. It's hard to see the £399 mono version selling well to gamers and how good the TV link up on the £299 standard is yet to be ascertained. Again, four colour capability looks a trifle weak beside the blazing blur of a decent ST or Amiga offering.

And yet the publishers will still support it heavily because, without getting too boring, they appreciate Amstrad's unbelievable skill at persuading the masses to fork out. Amstrad's marketing muscle is the envy of many a throbby corporation and awards have dutifully been bestowed on Mr Sugar for his well documented business acumen. The firm is currently gearing up for an absolute corker of an advertising campaign. And, despite perennial shortages, Amstrad's skill at getting hardware to market is unmatched in the low end PC arena.

Mum's the word

Apart from that the software houses have a suspicion that it won't be games players buying the machine but that old sector of the populace everyone loves to rely on – parents. That the kids will soon draft in games to replace awful education packages is understood by Amstrad and understood by the software houses.

"Experienced users will go for the ST or Amiga," thinks Alternative's boss Roger Hulley. "This is for first time computer users and for mum and dad.

"I didn't jump up and down when I saw the machine but with Alan Michael Sugar behind it..."

Alternative's full price offshoot Again Again is to make a debut foray into PCs with a new game after Christmas. Inevitably perhaps, it's a flight simulation (*Operation Hormuz*). Hulley reasons that the opportunities for releasing good ol' arcade games will be limited. "The IBM market isn't ready for that."

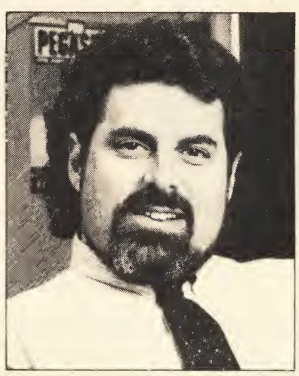
Those software houses preferring to play their cards close (ie. all of them) are saying that they will do their utmost to get the best out of the machine (etc. etc.). US Gold supremo Geoff Brown envisages the PC market opening up here. "It's the biggest format in the States," he said. And that counts for something since Gold is apparently having a good time of it over there with its Brit games.

Gold of course has four of its titles bundled with the PC200 so it's hardly surprising that Brown fully expects Amstrad to pull it off.

And while Gold is creaming it in the States Electronic Arts is furtively hoping for the PC to make its mark here. US software houses top brass have already filled their pockets with the riches of PC gamers Stateside and it doesn't take much to bung those games Europe's way.

● PC 200: Up against ST and Amiga?

EA's European operations director Mark Lewis enthuses: "We've been marketing PC games here since we started. But I've always thought that the PC user is one who wants to use the machine for a whole variety of things.



● Lewis: EA has traditionally supported PCs

If you're a user you want entertainment as well as the ability to create. I suspect a lot of people will also use it for word processing and will have a database."

Lewis admits that the machine's colour capabilities will prove an obstacle but he's impressed with speed capability. "*Chuck Yeager* is faster on the IBM than on Commodore or Apple."

Colouring the issue

Many are reserving judgment on the machine until they've actually seen it (which seems fairly sensible). Surprisingly, Ocean's boffins have yet to poke around inside the Pro's belly.

The firm's software development manager Gary Bracey is quick to point out that Ocean has been churning out PC games regularly for the past 12 months. "It would be nice to see the PC games area opening up. It needs to be more widespread and if this is the way to do it then fine."

On the colour capabilities he observes: "If the resolution is good then we can do nice things with it. Four colours is fine."

It's only fair to stress that Amstrad won't be pitching this as a games machine solus. It will be pitched as the ideal home computer for the whole family. Which isn't a million miles away from what the CPC was supposed to be.

But its appeal to the 25 to 45 age group is likely to be strong. It's easy to imagine many of them used to IBMs at work, wanting one for the home, and appreciating that younger members of the family can get some kicks out of it.

It's those younger members who the games publishers are watching closely. And their tastes aren't likely to differ enormously from other 16-bit counterparts.

PC200

pros...

Amstrad's marketing clout
Mammoth US market for PC software
Expandability
Good value - for a PC

...and cons

Poor value next to ST/Amiga
Four-colour graphics
Expandability is limited

Upwardly mobile programming

MORE AND MORE COMPUTER OWNERS ARE MOVING UP TO 16-BIT COMPUTERS. IF YOU JUST WANT TO RUN COMMERCIAL SOFTWARE, YOU CAN ENJOY ALL OF THE ADVANTAGES – EXTRA SPEED, EXTRA POWER, EXTRA MEMORY – WITHOUT ANY PROBLEM. BUT FOR WOULD-BE PROGRAMMERS, IT'S NOT THAT SIMPLE...

The first generation of microcomputers – Apples, Commodores, Sinclairs, etc – now collectively known as 8-bit systems, used different microprocessors but had many things in common. Not least, they were slow and short on memory.

The upshot of those limitations was that software had to be written in machine code, both for speed and because machine code programs take up less space than those in any other language. Secondly, and also for reasons of space, programmers learned to squeeze their programs into every available byte of memory.

Machine coders would spend hours in search of ways to reduce a section of code by a mere one or two bytes or a handful of clock cycles – savings of precious thousandths of a second.

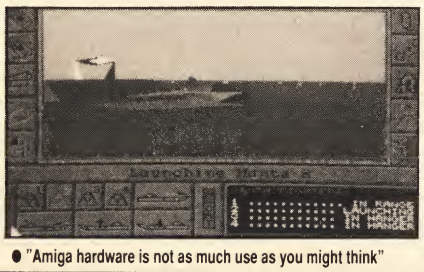
The second generation – the PC-compatibles, Atari STs and Commodore Amigas – feature much more powerful processors, and have large memories, typically between 512K and 2Mb of RAM. Not unnaturally, buyers of these machines expected life to be easier. All that memory looked like riches beyond dreams, and why learn machine code now when these superfast computers could turn in machine code performance from "easy" languages like C?

But that "machine code performance" was only when viewed in comparison to the older 8-bit computers. Programmers could only get away with the easy approach so long as the public was happy with 8-bit performance from their 16-bit computers. Of course, they weren't happy for long. And when the first genuine machine code programs for the new machines arrived, the game was up.

Especially in games. Programming teams like Argonaut and Realtime, with games like the *Stargliders* and *Carrier Command*, have begun to use the power of the new machines to create worlds in 3D, smoothly animated yet with lightning-fast action. The unimaginative conversions of old 8-bit product now look very humble indeed.

So in a sense, programmers are back where they started, squeezing their code to save time and memory. And when the day arrives that we all have the equivalent of a very powerful processors. But as soon as you start dragging large chunks of memory around, as you do with graphics, you lose the power you just gained. For example, the Spectrum display screen is about 6K, the C64 about 8 or 9K, the PC about 16K in CGA, but the ST and Amiga are 32K."

Surely the Amiga's dedicated graphic processors come in handy here? Apparently not: "From our experience on both the ST and Amiga versions of *Carrier Command*, the Amiga's dedicated hardware turned out not to be as much use as you might think. The blitter needs so much information in setting it up for use that the overhead negates any speed advantage. In fact, the ST version of *Carrier Command* is a shade faster than the Amiga on graphics."



● "Amiga hardware is not as much use as you might think"

Thanks for the memory

Andy Onions
Carrier Command ▪ ST/Amiga

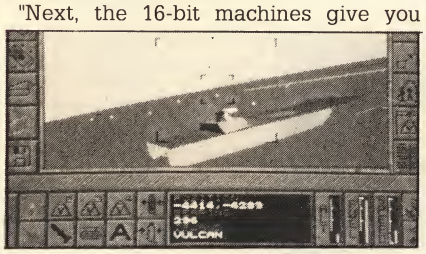
Carrier Command, programmed by Realtime Graphics, is a technical tour-de-force with a complete game universe – islands, buildings, ships, aircraft – depicted in fast, smoothly animated, solid-filled 3D. With *Starglider II*, it sets new standards for 16-bit entertainment.

But the company's roots are in 8-bit programming and it continues to produce excellent 8-bit software. Programmer Andy Onions is well placed, then, to discuss the differences.

"The main thing is that the 16-bit machines give you masses of memory. This means you can be very sloppy and write code that just grows and grows. Also, you can write code a lot faster on 16-bits because you don't have to be as careful with memory.

"However, the demand is for better graphics, and graphics eat up memory. With all that memory it would take you years to fill it with code, but you can fill it quickly with graphics.

"Next, the 16-bit machines give you



● Carrier Command - "ST version is a shade faster"

Great expectations

Jez San
Amiga/ST ▪ Starglider I & II

The original *Starglider* was one of the first programs to exploit the power of the 16-bit machines, and undoubtedly helped to sell a lot of Atari STs. And it's a measure of how far 16-bit programming has developed that *Starglider II* makes its predecessor look positively feeble.

After early work on the ST, Jez San switched to the Amiga, and now has to be considered one of the leading programmers on these two 16-bit superstars.

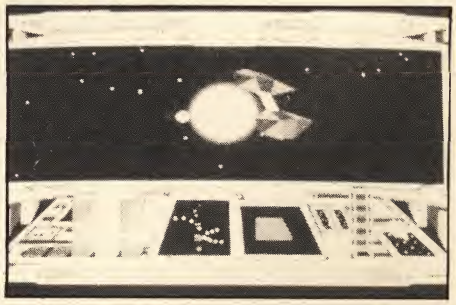
"Perhaps the fundamental thing is that people expect more out of the 16-bit machines and sometimes they aren't capable of delivering. For example, some of the 8-bit machines are much better at scrolling graphics.

"Where the 16-bit systems do score is in the maths – with built-in multiply and divide instructions they are far better at 3D graphics, which is what we specialise in.

"There are problems with memory on the new machines. While 64K on the 8-bit machines was plenty, 512K on 16-bit machines often isn't enough. Sound effects take up large amounts of memory – the soundtrack on *Starglider II* is about 450K. On good 16-bit games you're usually talking about 50K of code, 200K of graphics and 200K of sound but we could easily fill up more memory with graphics and sound .

"And things like expansion RAM on the Amiga, and machines like the ST 1040 and Mega STs don't help because you have to write for standard hardware, and that means 512K.

"What would be a help is faster access to peripherals. That is much more important



●Starglider II - "the soundtrack is about 450K"

Finding the right tools for the job ...

One thing all programmers have in common is the need for good development tools, and naturally the professionals want the best. A strong contender for that accolade must be one of the industry's best-kept secrets: PDS, the Programmer's Development System. Although extensively used by the major programmers, few outside the ranks of the professionals will have heard of it.

"There are now about 250 users of 8-bit PDS, and we've got about 20 beta testers of the 68000 system," says author, developer and publisher of PDS, Andrew Glaister.

That list of PDS users reads like a Who's Who of British programming: Telecomsoft, Virgin, Electronic Arts, Ultimate/Rare, Jez San, Realtime, and Archer MacLean are all PDS users. Among the programs developed using PDS are various versions of *Elite*, *Starglider*, *Star Wars* and *Empire Strikes Back*, *Tiger Road*, *Barbarian*, *Last Ninja* and *Afterburner*.

It is a combined hardware/software system running on an the PC. It comprises an interface board providing two ports, and the software and manuals. In addition, you need an interface for the target machine. The system costs £500, and a further £50 for each machine interface.

Very expensive compared to a copy of *Devpac*, say, but Glaister says cheerfully, "It pays for itself after the first project because it can halve your development time."

The software includes a full assembler/disassembler for the target machine (either Z80 or 6502), memory monitor and a graphics editor. The 8-bit version is blisteringly fast: on a 386-based PC, it will assemble 1Mb of source code in about 2 seconds, and transfer of the object code varies according to the target machine but on a Spectrum it's about 20K per second.

Using PDS, you can write your Spectrum program in Z80 assembler (on the PC), design the graphics (also on the PC), then assemble, link, and download your program to the Spectrum. Now you can run your program while the PC acts as a monitor, allowing you to examine registers, set breakpoints, and generally control execution of the program. If there are any problems, you can edit, reassemble and download again very quickly.

The advantage of PDS is that all your software tools are integrated into a single system, and controlling the target machine from a separate development system saves a lot of time since you're not having to switch constantly between development tools and the program under development. Both run simultaneously.

But why the PC? Andy Onions, of Realtime, makes the point: "Developing for the ST and Amiga is only practical with a hard disk, but they are very expensive on those machines – you're talking about £700. On the PC, you can get a hard disk with controller for about £175. All of the utility software you need is widely available for the PC, and it's all cheap. You also have a very reliable system."

And Glaister says, "Since we've had PDS on the PC we've had no complaints, and nobody's every questioned it. I love the PC – the new 386 machines are the most powerful computers available and VGA graphics allow you to develop for anything, even the Amiga."

Cray on our desktop, with gigabytes of memory and TV-quality graphics, you can expect one programmer to turn to another and say, "If we could just shave a few milliseconds off this routine..."

A BIT BAFFLED?

If you find talk of 8-bit and 16-bit systems confusing, have patience. Watch for a full explanation in Learning Curve, our guide for beginners, in the next few weeks.

than more memory – although 2Mb of RAM would be nice. But when we find a way of filling 2Mb we'd want more.

"Really fast disk drives would allow us to use disk space as virtual memory, and then your available memory becomes the capacity of the drive. Optical disks [with capacities of thousands of megabytes] look interesting in this respect."

San also dispels the myth of the the Amiga's specialist hardware for graphics. "The Amiga hardware is not really suited to 3D work. It's better for handling sprites and windows – incredibly useful for those sorts of things – but really you don't see much difference in ST and Amiga graphics. The good thing about the Amiga is that the hardware is completely standard. Blitters on STs are great, but because they're not there on all STs, they don't get used. '

What about the PC? "One problem with the PC standard is that it isn't really a standard. For example, on *Starglider II*, we're forced to support five screen modes – CGA, EGA, VGA, Tandy and Hercules. But as the better graphics standards like EGA and VGA become more established we definitely expect the PC to become a major market."

The power of the PC

Chris Andrew
Freescape ▪ PC

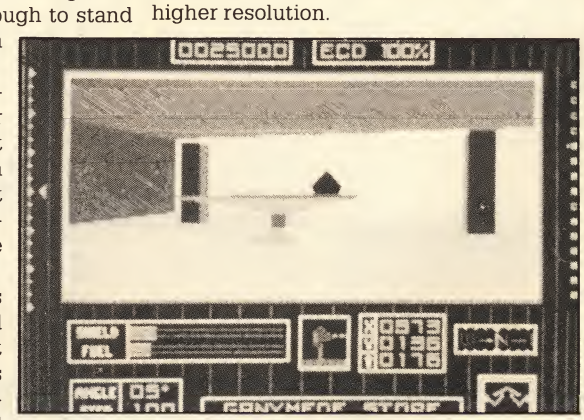
PC-compatibles are still considered a bit of a loser when it comes to games, but it can boast some outstanding examples, not least Incentive Software's *Freescape* series. The first instalments – *Driller* and *Dark Side* – were two of the best games ever on the PC and good enough to stand comparison with product on any machine.

Chris Andrew, of Incentive's software team Major Developments, talks about some of the differences in moving from 8-bit to 16-bit programming: "I like programming on the PC because it's so powerful.

"Moving from Z80 systems like the Spectrum and Amstrad to the PC wasn't very difficult. You do find this thing where Z80 programmers move to the 8086, and 6502 programmers go to the 68000 but I'm not sure why that's so. I find that any machine code language is quite easy – you just have to sit down and learn it.

The 8086 can be a bit of a pain because the memory is divided into 64K segments. You end up having to do your program in segments and then link them together, but you have to be very careful about where your segment pointers are pointing. In *Driller* we had a couple of obscure bugs because of that."

Graphically, the PC is always looked down on because of its most common standard, the four-colour CGA mode, but the increasingly-common EGA – with 16 colours from a palette of 64 – is as good as most ST and Amiga displays, and the next standard, VGA, outperforms even the Amiga with 256,000 colours and a much higher resolution.



● PC Dark Side - "graphics get complicated when you move to EGA"

Andrew says, "Programming graphics gets complicated when you move to EGA because of the way the screen memory is mapped, but CGA is relatively easy. You just have to make the best of what you've got."

And he finds some of the PC's limitations comfortable to live with: "I don't like programming sound anyway, so I quite like the PC because it means I don't have to do very much."

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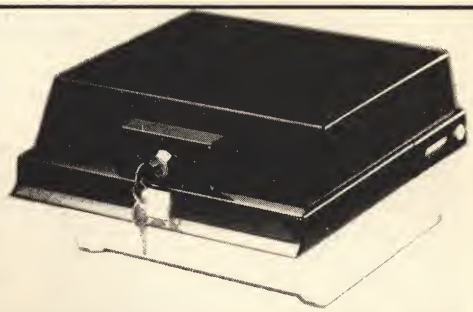

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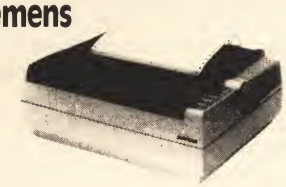

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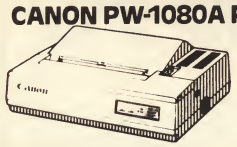

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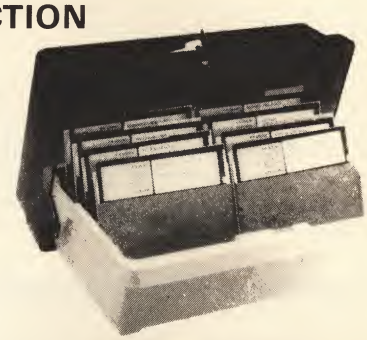

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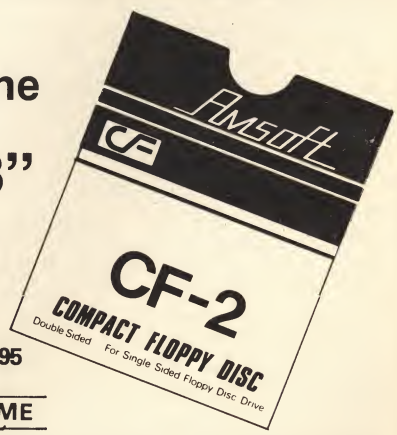

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Infocom statement of intent

Infocom goes graphic

'A THOUSAND WORDS IS WORTH A PICTURE' MIGHT HAVE BEEN INFOCOM'S MOTTO, BUT NOW THE MASTERS OF ADVENTURE SAY YOU CAN HAVE BOTH. IS THIS HERESY? A SULLEN BOW TO PUBLIC DEMAND? OR THE DAWN OF A NEW ERA? PETER WORLOCK INVESTIGATES ...

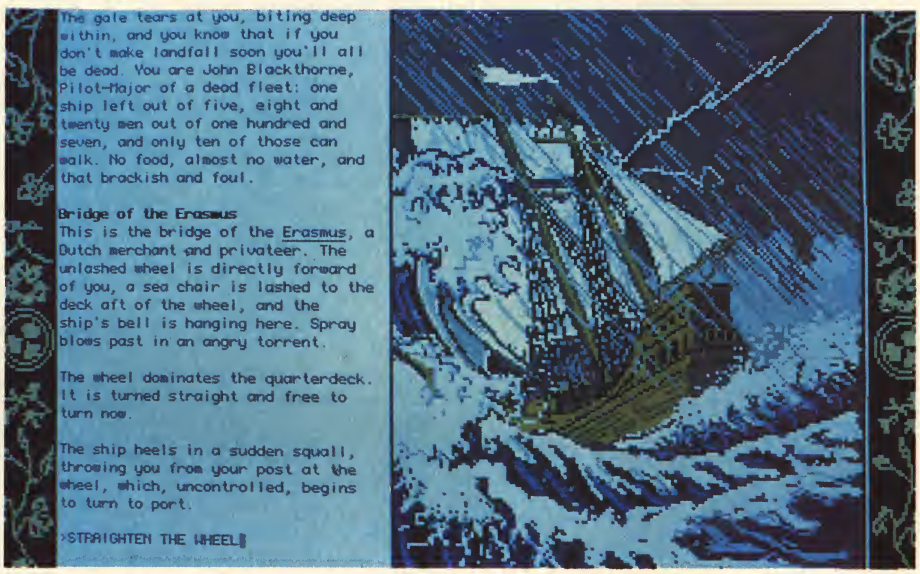
Infocom, the one-time masters of computer adventure, have not had a great 12 months. Pressured from all sides by the public demand for graphics, and the increasing popularity of animated role-playing games, the US company looked less and less confident as the year wore on.

Whereas Infocom games used to be rare events, inevitably greeted by critical acclaim and public clamour, the last half-dozen releases came thick and fast. Some fans felt that the quality had declined as productivity had risen, others that the quality was as high as ever but no longer quite good enough. And there was an air of desperation about some moves like the ill-advised (and, in this country, never-to-be-seen) InfoComics with their meagre storylines and laughable graphics.

Other developments, including the role-playing and self-mapping features of *Beyond Zork* received a lukewarm "thumbs up", but failed to recapture the excitement of old.

Now the company is poised to enter a new phase, with a range of products that it hopes will give the ailing old-timer a new lease of life. The new games have one thing in common: graphics.

Most radical of the new games is *BattleTech* (see below), Infocom's first real role-playing game, but the RPG theme carries forward into other products, notably *Journey*, which Infocom says is "a whole new realm of entertainment software" called role-play chronicles (the company hasn't yet lost it's yen for slightly pretentious marketing).

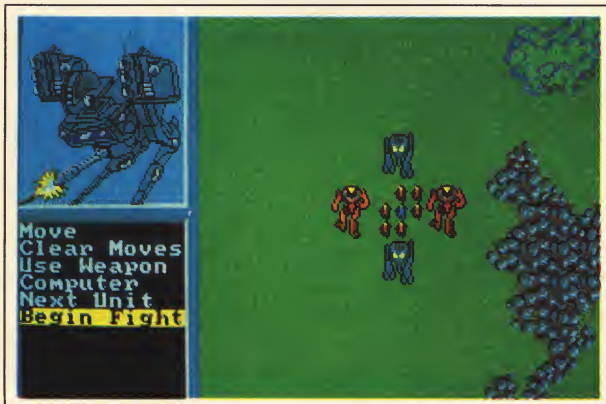

The gale tears at you, biting deep within, and you know that if you don't make landfall soon you'll all be dead. You are John Blackthorne, Pilot-Major of a dead fleet: one ship left out of five, eight and twenty men out of one hundred and seven, and only ten of those can walk. No food, almost no water, and that brackish and foul.
Bridge of the Erasmus
This is the bridge of the Erasmus, a Dutch merchant and privateer. The unlashed wheel is directly forward of you, a sea chair is lashed to the deck aft of the wheel, and the ship's bell is hanging here. Spray blows past in an angry torrent.
The wheel dominates the quarterdeck. It is turned straight and free to turn now.
The ship heels in a sudden squall, throwing you from your post at the wheel, which, uncontrolled, begins to turn to port.
>STRAIGHTEN THE WHEEL

● Shogun – lots of fighting and a bit of love interest!

Hardened readers will recognise little new in the story line: Tag, Praxix, Bergon, Esher and Minar head off on a quest for the "revered wisdom of the great wizard Astrix", exploring unknown lands and underground caves, and solving puzzles.

Written by *Zork* co-author Marc Blank, *Journey* is a more-or-less straight merging of the traditional Infocom text adventure with elements of role-playing games. The graphics in the game, in the form of Magnetic Scrolls' illustrations rather than the animated views of games like *The Bard's Tale* and *DungeonMaster*, look excellent, but the most that can be said at this stage is that if it works it should be great, "but the *Journey*, Grasshopper, is fraught with danger".

Much closer to the traditional adventure format is *Shogun*, written by second *Zork* co-author Dave Lebling. This is the second game license of James Clavell's best-seller (Virgin produced an arcade-adventure of the book a couple of years ago), and the story will be familiar to anyone who has read the book, watched the TV mini-series, rented the



Role-reversal

As if the switch to graphics wasn't shocking enough, heading up the list of forthcoming releases is Infocom's first non-adventure game. The officially licensed version of FASA's *BattleTech* system is a true computer role-playing game in which you play Battle-Mech rookie Jason Youngblood. Your aim is to survive long enough to save the universe from the deadly Kurita warriors.

On paper, at least, the new game will set any RPG fan's fingers twitching: four million locations, animated graphics in projected 3D style, together with masses of combat and the standard RPG features of developing characters and the ability to acquire new skills and equipment.

Infocom claims it will also boast a number of innovations, including the unlikely-sounding "emotive out-take". At various points in the game, the screen zooms in to show the emotional reactions of characters to various happenings.

Could this be the first three-Kleenex computer game?

video or played the Virgin game.

The game promises to have you "matching wits with tyrannical Japanese aristocrats and fighting off attacks by Ninja assassins", with a bit of love interest thrown in for good measure.

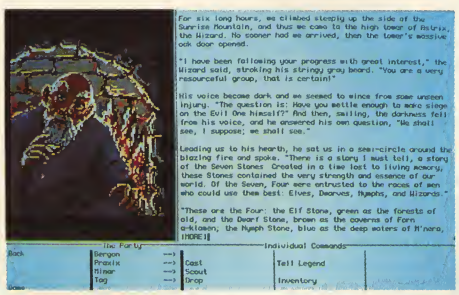
Again, there are illustrations, this time in "traditional 16th century Japanese style", and Mediagenic claims these are "the most outstanding that Infocom has created to date". It would be churlish to point out that this is no great recommendation, and, in fact, the

And on the question of churlish, one hesitates to comment upon the fourth item on the menu: *Zork Zero*. In temporal terms, Infocom calls this the prequel to the *Zork* Trilogy, but in gaming terms it's a development of the *Beyond Zork* latecomer.

Naturally, the action takes place in Quendor and promises to explain many of the questions that have intrigued Zorkers for years, such as where did grues come from?

Written by Steve "*Leather Goddesses*" Meretzky, *Zork Zero* is a text-and-puzzles adventure of the old school, but again Infocom has felt obliged to bolt on a few bells and whistles. There is the self-mapping feature of *Beyond Zork* and a new parser, but also the iffy idea of little graphical puzzles such as Peggleboz, the Tower of Bozbar and Double Fanucci.

Cynical readers may imagine they hear the distant sound of a near-dead horse being flogged, which might be taking things a bit far. But *Zork Zero* does smack of the Hollywood syndrome: if in doubt, remake an oldie. What can we expect next: *Son of Zork*? *Rambo Hills Cop Academy XII goes to Zork*? Digging so deep into its past doesn't bode well for a company struggling to find its way into the future.



● Journey – a touch of the Tolkeins

Zork Zero apart, however, the new line-up looks like a bold attempt to carry Infocom into a new era, while *BattleTech* is a radical departure and certainly the most exciting prospect. The merging of Infocom's classy adventures with a first-class RPG and combat system could take the games market by storm.

Avalanche
Moves: 791
Flathead Mountains
Score: 685
s you near the highest point of the pass, you discover that it is completely blocked by a recent avalanche, and you can travel no further to the northwest. However, the avalanche has revealed an ancient ravine leading up the side of the mountain here.
>CLIMB THE RAVINE
Timberline
You find yourself on the slopes of Mount Foobia, the tallest peak in the Flathead Mountains. A narrow ravine leads almost straight downward. The vegetation thins out here, and the air is getting a bit thin as well. Not too far above you, the slope disappears into the thick clouds which eternally shroud the apex of Foobia.

● Zork Zero – going back to mah roots...

Release Schedule

	PC	ST	Amiga	C128	C64
Zork Zero	02/89	03/89	03/89	04/89	n/a
Journey	**02/89**	**03/89**	**03/89**	**05/89**	**n/a**
Shogun	01/89	03/89	03/89	06/89	n/a
Battletech	**11/88**	**06/89**	**n/a**	**n/a**	**02/89**

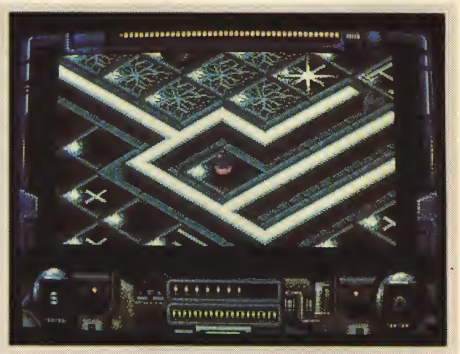
INCREDIBLE SHRINKING SPHERE

MEDIAGENIC

The marvellous marble madness of Mediagenic's latest strategic shoot-em-up looks set to score in the speed and reflex departments. As a recruit with the Sphere Training Corps your mission is to negotiate the deadly maze of the Sangfalmadore Run and rescue one of your superiors.

Featuring assassin spheres, traps and prison squares in amongst its eight multi-directional scrolling levels, *Incredible Shrinking Sphere* rates pretty high with its graphics and sound FX too.

- **Screenshot from the ST version.**
- **Also due out on the Amiga, Spectrum, CPC & C64.**



SUPERMAN

TYNESOFT

Marvel Comics' second superhero makes it onto the silicon strips in an shoot-em-up designed around 15 pages of comic action. Icon-driven captions allow you to control him through 12 missions featuring the canon-throwing Parademons as he attempts to save shuttles and satellites with super strength, super breath, super hearing, and super vision. Super eh?

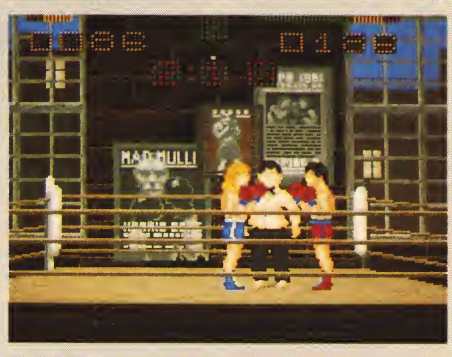
- **Screenshot from the ST version.**
- **Also due out on Amiga, PC, Spectrum, CPC & C64.**

THE CHAMP

LINEL

Box your way from the brawling back-streets to the centre-stage Champion of the World in this one or two-player strategic punch out featuring massive sprites shifting through 15000 frames of animation. You have 11 different offensive/defensive moves as well as clinches and illegal manouevres with which to defeat the boxing world's finest. Slo-mo replays will show your last moments while the theme tune from *Rocky* accompanies your long haul to the top.

- **Screenshot from the Amiga version.**
- **Also due out on the ST & C64.**



RETURN OF THE JEDI

DOMARK

Following on from *Star Wars* and *Empire Strikes Back*, but marking a departure from their wire-frame graphics, comes the final release of the trilogy where you're up against the Imperial Deathstar. Fly speederbikes, Scout Walkers and Millenium Falcons as you evade Imperial Stormtroopers, Tie Fighters and Cruisers in your attempt to take out the Death Star and escape before it takes you with it too.

- **Screenshot from the Spectrum version.**
- **Also due out on the ST, Amiga, CPC & C64.**

GRAND PRIX CIRCUIT

ACCOLADE

Drive a Formula One racer around 8 international circuits after choosing from three car configurations. You select the best design for each specific track and race against 15 other drivers with varying styles. Pit stops and tyre changes add to the realism, as do tunnel sequences where you're driving blind.

- **Screenshot from the PC version.**
- **Also due out on the C64.**

NEUROMANCER

ACCOLADE

Based on the novel by Bill Gibson which won just about every Sci-Fi award possible, comes Cyberpunk atmospherics and a fully-digitised sound track by Devo to set you in a 21st century Japan of hi-tech urban decay. You use your skills as a hacker to break into heavily protected government and corporate databases by cracking Cyberspace; the universal data network, the aim being to amass as much hardware and software as possible.

- **Screenshot from the C64 version.**
- **Also due out on the PC.**

Anything else you want to tell me?
$960
Russian arm whines as he wipes the bar. His teeth are a webwork of East European steel and

Easy PCs

MS-DOS MAY BE THE MOST WIDELY USED OPERATING SYSTEM IN THE WORLD – BUT NO-ONE SAID IT WAS GOING TO BE EASY. PETER WORLOCK LOOKS AT THREE PACKAGES THAT SHOULD EASE THE PAIN.

"User-friendly" has been one of the most popular concepts in computing for the past few years. Unfortunately, MS-DOS pre-dates that popularity by quite a margin. Not to put too fine a point on it, MS-DOS can be downright hostile with its cryptic command syntax and odd abbreviations.

No surprise, then, that WIMP (Windows, Icons, Menus, Pointer) environments like Windows and GEM have become popular for the PC. Unfortunately, these front-ends have their own problems; specifically, they consume a lot of disk space, making them practical only on hard disk machines, and they take a while to load every time you turn on your PC.

A better bet are compromise systems that provide easy-to-use menus without going all the way into extensive graphic displays. Two of the better-known such systems are the *Norton Commander*, and *Tree86*, and both have just been upgraded and enhanced.

THE NORTON COMMANDER
Peter Norton Computing • £59.80 inc VAT

Peter Norton is probably better known for the Norton Utilities, but *Commander* has long been the leading DOS front-end system for PCs. Now in version 2.0, it offers pull-down menus, improved file browsing, and support for EGA and VGA displays, as well as being generally faster and more functional.

Installation is simplicity itself: copy all the files to a working disk, and then enter NC, or adjust your AUTOEXEC.BAT file. *Commander* loads into its basic screen which consists of one or two disk directory windows.

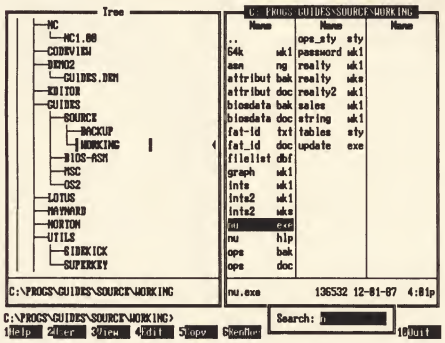
From here, you can perform most DOS functions, such as copying, renaming and deleting files either by use of the drop-down menus, or from the function key pad. *Commander* can be mouse-driven, or you can use the PC's cursor cluster to emulate mouse control, or you can use the keyboard shortcuts provided.

Having twin directories makes *Commander* particularly enjoyable to use, since you see both the origin and target disks. Further, you can mark multiple files for copying and deleting in a single action – much easier and safer than using the DOS wildcard facility.

This is fine so far as it goes, but *Commander* goes much further. For example, the file browsing utility is more useful than DOS's TYPE command since it allows you to scroll forward and back through the file. Moreover, *Commander* has special options for viewing dBase and Lotus spreadsheet files.

Actually editing your files is also easier because *Commander* provides a text editor. You can use your own favourite but *Commander*'s is more than adequate for quick changes to existing files, or for creating batch files and the like.

Finally, *Commander* gives you the ability to create a custom menu from which you can launch your most-used applications with a single keypress. The icing on the cake is the added bonus of tying documents to their applications and launching those from the directory screens. For example, if you have a document file LETTER.DOC created in *Wordstar*, *Commander* lets you choose LETTER.DOC from the directory, and when you hit RETURN the PC loads *Wordstar* and LETTER.DOC ready for editing.



The documentation is a model of clarity, clearly written, well-designed and with copious use of sample screens from the program. In addition, there's a quick guide which is basically a pictorial reference to *Commander* – rather superfluous but where documentation is concerned, better too much than too little, I suppose.

TREE86
The Aldridge Company • £45.90 inc VAT

Tree86, from the lesser-known David Aldridge, sets out to do what *Commander* does – to provide an easier, menu-driven front-end to DOS. Unfortunately, it doesn't succeed nearly as well.

As its name suggests, the program shows disk directories in the form of a tree, tracing the branch-like structure of sub-directories and files. This clearly shows the structure of your directories, but it can be wasteful of space, and the result is that *Tree86* can display only one directory at a time, as opposed to *Commander*'s two (*Commander* provides the tree display as an option).

The shortage of space is exacerbated by the fact that *Tree86* devotes about a quarter of the screen to a permanent display of disk and machine status. Although it is occasionally useful to know the free space on the disk, the numbers and kinds of files, and how much memory you have available in the PC, you certainly don't need the information all the time. With *Tree86*, you have no choice.

The program is designed to be used with a mouse; if you don't have one available, you're reduced to using some fairly cryptic single-key commands, which isn't as satisfactory as *Commander*'s cursor-key alternative.

In addition to the usual DOS commands to copy, rename and delete files, *Tree86* adds little more. There is a file-browser but this is barely more functional than TYPE (you can't scroll backwards), although it does allow you to switch between ASCII and hex displays. Finally, you can run PC applications from within the program but, again, in more limited fashion than *Commander* provides. For example, *Tree86* provides no editor, you have to bring your own, and while it can automatically load a document, you have to allow for this by amending a batch file outside of *Tree86* – not a task to endear the package to PC novices.

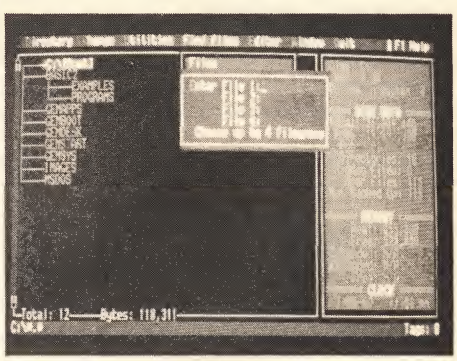
Mr Aldridge's package generally has an unfinished feel to it, an impression only reinforced by the manual which provides only the briefest coverage of *Tree86*'s features.

Verdict

In this two-sided contest, *Commander* must be considered an outright winner. Professionally presented, and with a host of extra features, it leaves *Tree86* for dead.

It can be highly recommended for beginners struggling to come to terms with DOS, and *Commander* might find a particularly warm welcome in offices where it should allow occasional users of company PCs to get to grips with the machines a lot more quickly and easily.

However, once you're beyond the beginner's stage, there isn't really much reason to look at something like *Commander*. A better bet would be a DOS management program like *PC Tools Deluxe* which provides all the facilities (except mouse control) of both *Commander* and the *Norton Utilities* in one powerful package.



HELPME
California Software Products Inc• £79 inc VAT

Perhaps the single biggest advantage of the PC system is its flexibility. Video displays, memory capacity and disk storage are all customisable, and the vast library of MS-DOS software is unparalleled. You can literally turn a PC into the kind of computer you want.

However, that flexibility also provides limitless opportunities for conflicts and incompatibilities in hardware and software, and problems like that can be exceedingly difficult to fathom. Which makes a good case for *HelpMe*, one of a new batch of utility programs from CSPI.

HelpMe is the disk-based equivalent of having a PC technician at your beck and call, providing more than 300 diagnostic tests for PC hardware and software. Uses range from helping a novice set up MS-DOS by automatically configuring CONFIG.SYS and AUTOEXEC.BAT files, through to highly technical analysis of the hardware status without the need to remove the PC's cover and dig around inside.

In fact, if there's anything you want to know about the set-up of your PC, *HelpMe* can probably tell you. Want to know the state of file-fragmentation on your hard disk? No problem. Easy. How about a list of interrupt requests and their memory locations? Child's play.

Naturally, the key question is, how often do you need to know these things? For corporate DP managers the answer is probably, all the time. For the computer enthusiast with a PC at home the answer is probably, hardly ever.

But *HelpMe* is a bit like insurance. When everything's going fine you'll resent the premiums, but when you need it, it's worth almost any price. Imagine lugging your PC all the way into a repair shop, only to find that *HelpMe* could have told you your new display card was the cause of the problem!

It's easy to install and use, and seems to work well (hard to say – there's nothing wrong with my PC, he said smugly). Casual PC users could probably live without it, but if you absolutely have to have working PCs, you should have *HelpMe*.

In the Beginning...

BUYING YOUR FIRST COMPUTER CAN BE A DAUNTING EXPERIENCE. CHANCES ARE, YOU'RE NOT SURE WHAT IT CAN DO, AND TO CAP IT ALL, ONCE YOU'VE BOUGHT YOUR MACHINE, YOU FIND YOUR PROBLEMS ARE ONLY JUST BEGINNING. YOU NEED THE EXPRESS GUIDE TO LIVING WITH A COMPUTER. WEEK BY WEEK, PETER WORLOCK EXPLAINS THE CONCEPTS AND THE JARGON.

When I first became interested in microcomputers – in the days of the UK101, Nascom, Pet, Apple II, and the amazing Exidy Sorcerer (the Amiga of its day) – I was an impoverished junior reporter on a small weekly newspaper. Owning one of these magnificent machines was only a dream, but I bought all the computer magazines (all three of them) every month, barely understanding a tenth of what I was reading and learning more from the adverts than I did from the articles.

When the dream came true and I finally bought my first computer, I at least understood most of the jargon and had a fair idea of what I could do with the machine.

Need to know?

Any particular concepts or bits of jargon you don't understand? Anything you always wanted to know but were too embarrassed to ask? Why not write to: First Timers, New Computer Express, 4 Queen Street, Bath, BA1 1EJ. No question too dumb, no subject too simple, and no condescending replies. Guaranteed!

For most people today, a two-year wait for a computer is unlikely and unnecessary, but it means that many first-time buyers get their computers home without knowing the first thing about them. Assembling the various bits is usually easy, but as soon as you turn on the machine you're lost.

Don't panic.

The first problem for many beginners is understanding the difference between hardware and software. So ...

Hardware is the stuff that hurts if you drop it on your fingers. Your computer will consist of one or more bits of hardware: an Amstrad PC, for example, has the system unit, the keyboard, and the monitor; older machines like the Spectrum and Commodore 64 have the system unit and keyboard combined into a single box.

The system unit is the 'brain' of the computer, the bit that does all the work. The other pieces of hardware, including the monitor, printers, disk drives, and so on, are usually referred to as 'peripherals', simply because they're peripheral to the system unit.

Peripherals are necessary for reasons that are obvious when you think about it. You need devices like keyboards (and joysticks and mice) to communicate with the computer: issuing commands, and providing information for it to work with. The computer needs devices like monitors and printers to communicate with you.

● Getting your computer home is only the start of your problems.

Software is the stuff that makes computers work, and software equals programs. Programs are simply lists of instructions which tell the computer how to perform a certain task (cookery recipes, instructions for building model airplanes, and knitting patterns are all examples of programs for people). Without a program, the computer is unable to do anything.

Most software is external to the machine and comes on tape or disk – games, graphics programs, word processors etc, are all supplied in this way. These kinds of programs are usually called applications.

However, it is apparent that some programs must be built in to the computer, otherwise it would be unable to read the application programs from the tape or disk, so all computers have more or less of this built-in software. Machines like the ST, Amiga, Amstrad PCW, and PC-compatibles only have a minimal amount of this software, enough to be able to read and execute other programs from the disk drive, particularly a special program called the operating system. Older machines like the Spectrum, Commodore 64, and BBC Micro have much more built-in software, including entire versions of the Basic programming language, and the operating system. The operating system provides a general set of housekeeping programs which tell the computer how to read the keyboard, how to display information on the monitor, and how to store data on disk or tape. To do anything more complex – in other words, to do the things you bought the computer for – you must acquire a specialist program and load it into the machine.

For now, it's enough to understand these differences: hardware is the physical stuff, software is programs, and programs come in two different kinds: operating systems, which the computer needs before it can do anything at all, and applications programs, which the computer needs before it can do anything useful.

We'll talk about these and other topics in more detail in future articles.

Technobabble

The subject of memory is one of the more jargon-ridden areas of computing, and nothing marks you down as a novice more than using the jargon incorrectly. Saying things like, "My computer has a lot of K," when you mean it has a large memory is like saying, "My car has a lot of MPH" when you mean it's quite fast. Sure to set the experts sniggering!

Computer memory comes in two kinds, RAM and ROM. ROM is non-volatile – its contents are permanently fixed and turning off the computer's power has no effect on it. For this reason, ROM is used to hold the computer's built-in software. But it also means that the contents are unchangeable – obviously no use for temporary information and programs that you don't want permanently in the machine.

RAM is the temporary workspace where the computer holds programs and the information it is working on. RAM needs a constant flow of electric current to work, so when you switch off the power, RAM is wiped clean.

The basic unit of memory is the byte, a group of eight binary digits, or bits. The kilobyte, usually shortened to K, is 1,024 bytes, not 1,000 bytes, so a computer that has 512K of memory has 524,288 bytes of RAM. A megabyte is 1,024 kilobytes, so that the 512K computer has half a megabyte of RAM.

TIME TO TALK

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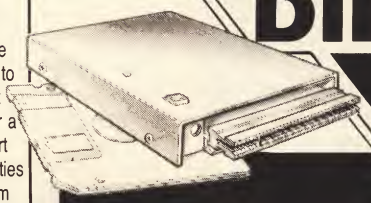

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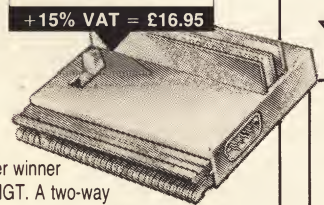

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And the time to talk can be almost any time. Our phone lines are open till 7p.m. Monday to Friday in case you want to call us after work — even after that, there's an answer-phone. Just leave a message and we'll call you back.

It's time to talk to MGT first!

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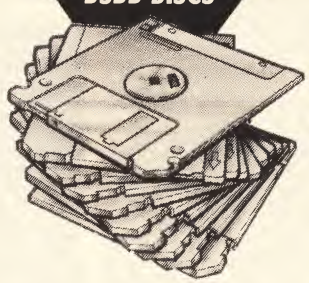

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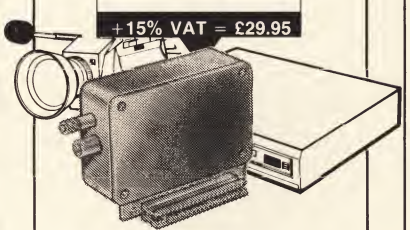

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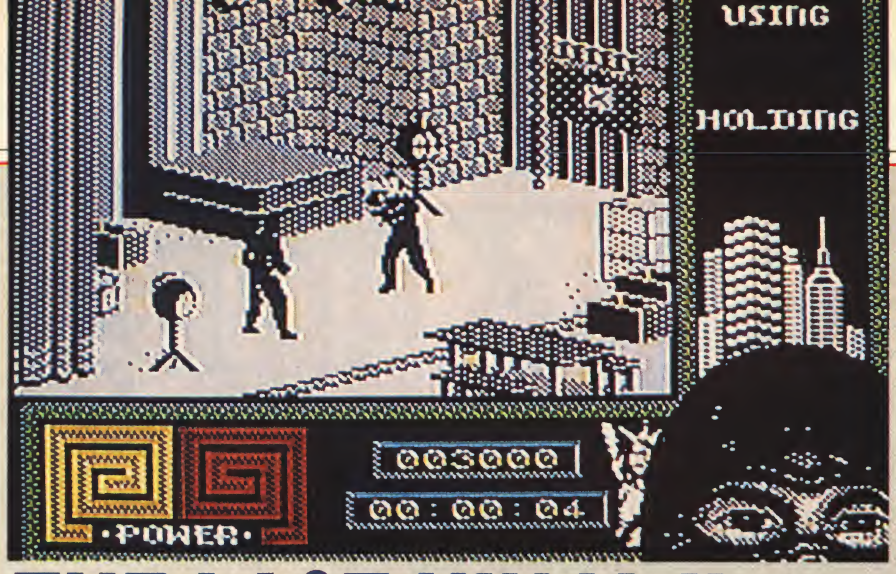


THE LAST NINJA II

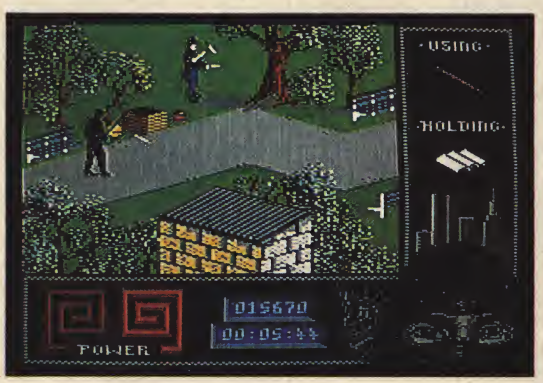
SYSTEM 3

C64 • £12.99cs, £14.99dk
Also on Spec, CPC. Due next year on ST, Amiga, PC

When *The Last Ninja* finally appeared on the C64 early last year everybody was amazed by its state-of-the-art, film-like visuals. *TLN* combined the beat-em-up and arcade adventure genres – a strange blend that actually worked.

These factors, helped by a great deal of hype, catapulted *TLN* straight into the C64 charts, and it eventually achieved the number one position. Unfortunately *TLN* had one major flaw – a lack of heart-pounding action. Gameplay consisted of laboriously visiting each location (taking as long as you liked) and either killing or collecting something. Incredible audio-visuals could not hide this deficiency for long and resulted in many players just giving up.

The Last Ninja II has the same audio-visual quality as before, but now promises extended gameplay as well.



● C64: One of Central Parks many hazards – a knife throwing juggler!
● Spec:(Main pic) A whole new meaning to lights, camera, action.

● **GAMEPLAY**

TLN2 places you in the role of Armakuni, hero of *TLN* and now master of the ancient ninja art. Unfortunately, you take the art too seriously, and while meditating one day, you manage to transport yourself through time and space, from your native 12th century Japan to 20th century New York. This is just the start of your problems, as your arch enemy, Kunitoki, has also managed the transition. So it's up tc you (yet again!) to rid the world of the evil Kunitoki.

As with *TLN* you are represented on-screen by an agile Ninja sprite, who (by different joystick combinations) can perform those Ninja actions: punching, kicking, stabbing and slashing, to name but a few. In true Ninja tradition you're adaptable, manoeuvrable and can handle any weapon you stumble upon.

During your quest for Kunitoki you'll encounter many of the dangers of modern day life. Items such as credit cards, hamburgers, muggers and policemen are all there to hinder (or help) your further progress.

The game is divided into six multi-load levels (central park, downtown Manhattan, sewers, opium factory, office block and shogun's retreat). Each level contains its own dangers, pitfalls and puzzles which have to be negotiated within a time-limit.

Other additions to *TLN* come in the form of five lives (instead of one), joystick control improvements and a score facility.

● **GRAPHICS AND SOUND**

Graphically, *TLN2* is even better than its predecessor, thanks to the artistic talents of Hugh Riley (graphic designer on both games). The animation, definition and colour of both backdrops and sprites is superb. The oriental-type soundtracks that accompany *TLN2* are well crafted and add to the atmosphere of the game, but the lack of sound effects (unusual for a martial arts game) mutes the enjoyment factor gained when knocking-out an opponent.

● **OTHER VERSIONS**

Spectrum *TLN2* manages to hold its own against the C64 version, albeit with a monochrome display. The CPC version should be available as you read this.

● **EXPRESS VERDICT**

TLN was a hard act to follow, but *TLN2* manages the task admirably. The state-of-the-art visuals are matched by tweaked gameplay, the boredom factor now gone. With six levels to complete before the final showdown with Kunitoki, long-term interest is assured.

The only criticism concerns System 3's marketing of the product, *TLN2* comes complete with cotton Ninjitsu mask, rubber Shiraken Star and pseudo-3D map. Unfortunately these little goodies add an extra three pounds to the asking price (estimated value being 28p).

Despite the dubious merit of the extra goodies, *TLN2* is still one to add to your collection – especially if you can coax your software dealer into selling you the game separately.

✪ ✪ ✪ ✪ ✪

VIRUS

FIREBIRD

Amiga • £19.99dk
Also on ST, Spec

Something wonderful has finally happened...the Amiga version of the state-of-the-art Archimedes graphics outing is up and running at last.

● **VERSION UPDATE**

For those who don't already know, your mission is to fly an ultra-responsive hoverplane in solid 3D flight in a search for alien craft polluting a patchwork surface of fields and oceans.

The Amiga's sound is a distinct improvement over the ST version – spot effects are now in stereo and provide much greater atmosphere. Colliding with the sea produces the bubbling sound of your hoverplane sinking!

In its vision, style and attention to detail, *Virus* sets the standard for moving graphics. Pity then that gameplay is

● You line up your hoverplane for a shot at this infectious Seeder sowing its red virus. The scanner top left shows your current position and the blips of enemy craft.

rather repetitive. The Spectrum version can only be described as a distant relative of the 16-bit versions, bearing only a laughable resemblance in all departments.

✪ ✪ ✪

NIGHT RAIDER

GREMLIN

PC • £19.99dk
Also on ST, Spec, CPC, C64

After its release on all the other major formats, *Night Raider* finally makes it onto the PC.

● **VERSION UPDATE**

Your task is to fly your Grumman Avenger, stationed on the aircraft carrier Ark Royal through enemy infested skies tof sink the notorious German Battleship Bismarck.

With four views to choose from – the pilot's, engineer's, navigator's and rear gunner's, there's plenty to do along

● Gotcher! Another Dornier goes down in flames (CGA PC).

the way. The game is a combination of simulation, strategy and good old arcade action.

The CGA graphics are just about adequate, while the EGA version is quite pretty. Sound is up to the usual PC standards – i.e. dismal. With an engine note that sounds like a fast-dripping tap, you might chose to turn the sound off altogether.

The ST version has, not surprisingly, the best graphics, and mouse control is very handy for those action sequences. The 8-bit versions are rather less impressive but still good, while the PC version, with its poor graphics (in CGA mode) and awful sound is, alas, the worst of the bunch.

✪ ✪ ✪

SAVAGE

FIREBIRD

CPC • £8.99cs, £14.99dk
Also on Spectrum

Savage is an axe-wielding warrior who has to battle his way through dungeons overrun with all manner of evil creatures bent on his destruction. His aim is to escape the dungeons into Death Valley – but that's only the beginning...

● **GAMEPLAY**

Right from the start *Savage* is tough – the swarms of attacking creatures are vicious and unpleasant, and it's going to take you quite a while to reach the end of the level and defeat the guardian. Do that, though, and you learn a password which will allow you to access Level 2.

This is an altogether different proposition, as you race across a landscape seen through Savage's eyes and strewn with ghastly green monoliths. You have to avoid crashing into these at the same time as shooting the skulls hovering over the ground.

Level 3 is different again. You control an eagle viewed side-on, and this time you are back at the castle, and trying to gain entry to rescue your beloved maiden who you were tricked into leaving imprisoned there.

● **GRAPHICS AND SOUND**

The gameplay is upstaged by the graphics, which are amongst the prettiest and most colourful you will see on a CPC. Animation and scrolling are good, as are the sound effects (you only get music at the start).

● Level One, and Savage faces attack from all sides.

● **EXPRESS VERDICT**

Savage is very pretty and offfers three distinct game styles. Against that, three levels isn't much, and the sheer difficulty of the game right from the start is only half a solution. It scores on initial appeal and variety, but whether the long-term interest is there is another matter.

● **OTHER VERSIONS**

Also out on the Spectrum, *Savage* should also be appearing soon on the Amiga, ST and PC.

✪ ✪ ✪

PIONEER PLAGUE

MANDARIN

Amiga • £19.95dk
No other versions planned

Billed as the first game to feature all 4096 colours of the Amiga's HAM mode, *Pioneer Plague* also attempts to combine eight-way scrolling action with digitised speech and a variety of original stereo music scores.

● **GAMEPLAY**

The Pioneer Probe Mark IV is terra-forming any planet in its path, having lost an essential piece of code and gained a whole host of defence systems. It's also multiplying.

First you jump through sub-Euclidean space in your LifeStar cruiser and descend to the first of the stricken planets. The quicker you navigate this section, the fewer probes you'll have to take out once you've arrived.

You now find yourself above a Manhattan-like series of urban blocks and harbour areas, featuring the occasional control tower and fuel dump. At this point you swap mouse for joystick or keyboard, dispatch your 'Airship ' and use local radar to spot Sky Hatches containing probes waiting to take off to take you out.

There are four kinds of robotic adversary – circular moving Star Shark fighters, homing bombs, air mines and 'Boxers' – devices which effectively reduce the space in which you can move. You can either take out these little beauties with photon missiles (fire button), or despatch one or a team of programmable drones.

Once a planet is cleared you can return to the galaxy

PACMANIA

GRANDSLAM

Amiga • £19.95dk
Also on Spec, C64, CPC, ST, MSX.
Archimedes version under development.

When *Pacman* first appeared in the arcades back in 1980 it was an instant success and soon achieved cult status. This was partly due to its simple but addictive gameplay, colourful and advanced graphics (for the time) and great sound effects.

Although there were hordes of home computer versions of *Pacman* a few years back, recently there have been very few. That is, up until now. Thanks to Grandslam you can now enjoy the latest *Pacman* arcade incarnation – *Pacmania*.

● **GAMEPLAY**

Pacmania is played over a maze filled with dots, pills, fruit and other scrumptious items (burp!). You control Pac, a sort of 3D version of "Smiley" (the old 70's cult-badge now hip thanks to Acic House) who's sole aim is tc travel around the maze eating any delicacies that come his way. Unfortunately ghosts protect the maze from munching marauders and collision with these is fatal. These ghosts (Inky, Pinky, Blinky, Clyde, Funky and Sue) live in the centre of the maze known as the cage, only venturing out when Pac's pigging out. Each ghost has its own personality (identified by colour) and reacts differently to Pac's movements.

● Amiga: Pacman bounces his way out of trouble, confusing the green ghost along the way.

Luckily help is at hand (mouth?), thanks to a few catch pills scattered around the maze, which give Pac the opportunity to hunt the hunters. Once a ghost has been consumed all that's left of the poor wretch is a pair of eyes which go scuttling back to the cage for a new suit. If Pac gets too greedy, though, he might just bite off more than he can chew because ghosts are in season for a limited period only.

Once Pac's gorged the maze dry it's on to the next maze, with more ferocious ghosties and a faster pace.

So far there's not a lot of difference from the original *Pacman*. Upgrades come in the form of four pseudo-3D eight-way scrolling mazes, with only a portion viewable at any one time. Other additions are audio-visual improvements and a new feature – the ability to jump over the ghosts.

So with some 19 levels of play you should be assured of a frenzied feast of fast food frolics.

● **GRAPHICS AND SOUND**

Graphically, *Pacmania* manages to reproduce it's arcade parent perfectly (well, almost). Although at first the graphics appear simple, this is just part of *Pacmania*'s charm.

Pac and his foes are all beautifully drawn and animated, with a good use of colour and definition. The characters and mazes all move smoothly on-screen and as an added bonus the whole of the screen is used.

The three soundtracks provided are simple but infuriatingly catchy and are accompanied by all those *Pacman*-esque sound effects that we've all come to know and love.

● **OTHER VERSIONS**

Pacmania is available now for all the other machines except the Archimedes (which is reported to be identical to the Amiga version).

The only noticeable difference with the other versions available is the screen display (half for the maze, half for game info) which detracts slightly from the brilliance of the full screen Amiga version.

● **EXPRESS VERDICT**

Pacmania has managed to capture all the ingredients that made the original so popular (simple addictive gameplay, simple but colourful graphics and excellent sound effects) and then used 1988 software techniques to improve it. The wide appeal is still there and is complemented by immediate aims and rewards.

Sure, gameplay may be limited, but *Pacmania*'s the kind of game you can keep going back to and still enjoy, and is easily the best release from Grandslam so far.

Enough said – just visit your local software dealer and take it away!

✪ ✪ ✪ ✪

FISH

RAINBIRD

Atari ST • £24.95dk
Out soon on Amiga, PC, Mac, C64, CPC, PCW, Apple 2, Spec + 3

Magnetic Scrolls' latest adventure seems to mark no major departure from the system successfully employed in *Jinxter* and *Guild Of Thieves*, which is a surprise since the interface used in their most recent release, *Corruption*, was the most sophisticated they've come up with.

However, *Fish* easily maintains Mag Scrolls' reputation as the most off-the-wall outfit ever to have surfaced in interactive fiction. In how many games do you star as a goldfish?! And a Fish-scientist at that?

● **GAMEPLAY**

"Warning!: some fish are really Inter-Dimensional Espionage Operatives in disguise. Treat them with utmost respect, they have many worlds to save. And one of them might be yours." So says the initial blurb and things immediately become a little clearer – you're role is that of a special agent working for an organisation which has the technology to warp you somewhere else – *as* someone else. 'Host-Parasite Mode' it's called.

So after finding yourself floating upside down in a bowl you quickly find three warps inside a sub-aquatic plastic castle and you choose which one you want to explore. You're after a bunch of inter-dimensional anarchists known as the Seven Deadly Fins whose diabolical mission is to rid the world of water. They've sabotaged a device assembled to prevent this disaster and it's your job to find out how the device was corrupted, which one of the seven did it and replace the missing part.

Each of the first three warps works as a mini-mission which you must complete to move onto the final and most substantial mission – a trip to Hydropolis, realm of the fish people. One finds you wandering around a recording studio having warped into the body of a general go-for, the second has you stranded in the back of a roadie's van near a hippy happening and the third finds you deep in a forest dodging exploding parrots.

Weird isn't the word! You'll be either relieved or disappointed that there's no violence involved in any of this – entering 'attack so and so is met with a stiff 'you don't need to use violence in this game' – so the emphasis is placed firmly on using logical solutions to complete the puzzles. In a game so obviously wacko it's a good job there's logic swimming around in there somewhere.

PLUSH LOUNGE
10/8
Files
Text
Graphics
Goodies
A waste bin is standing in the corner. Rod is loafing around, as tape ops are wont to do. An important-looking beetroot-faced producer enters the room behind you. "You," he shouts charmingly, "make some coffee or you're fired!" He strides out.
>_

well WEIRD

● **PRESENTATION**

Fish features the usual Scrolls' pull-down artwork – in this case simple 'hand-drawn' renditions of scenes. The pictures are designed solely for atmosphere rather than to provide any additional clues. If it's clues you're after there's a cypheric help section included which can be accessed by entering 'Hint'.

Text is clear and easily readable. As with all Rainbird releases there's a hefty package of supplementary material. Aside from the 'Landscape' box cover and poster, there's a manual issued by the Department of Inter-dimensional Espionage covering all you need to know about warping for beginners, along with more bizarre inclusions such as a weekly travel card – the 'Fish-pass', a fish identification chart and a booklet on how to get the most from your fish.

● **OTHER VERSIONS**

Due out in November are the Amiga and PC versions with releases on the Mac(kerel), C64, CPC, PCW, Apple 2, and Spec + 3 planned for the New Year. All versions are configured from Mag Scrolls' Vax and are essentially text-based, so there shouldn't be much difference.

● **EXPRESS VERDICT**

Despite sounding as though its authors are severely unhinged, *Fish* is one of the easier and more user-friendly Mag Scrolls' adventures, and relies on straightforward puzzle solving rather than esoteric inputs. The command system is more than adequate and gameplay is sufficiently engrossing to ensure an enjoyable passage through what could easily be the craziest adventure release of the year.

✪ ✪ ✪ ✪

map and choose your next port of call. If by this time all planets have become infected you have failed in your mission and it's game over. Until next time.

● **GRAPHICS AND SOUND**

The two most obvious elements are the beautifully-drawn, HAM mode inter-level screens and the ever-present chunky funk of the backing scores. Sub-Euclidean Space – a fast-moving tunnel of fractal mapping – is also very interesting. The planetary surfaces are also quite competent graphically but perhaps a little too repetitive in their detail.

● **EXPRESS VERDICT**

Pioneer has all the makings of a classic – its graphics are sexy and overall presentation very professional. The fractal sequences alone could make the basis for a game. But you're left with the nagging feeling that 4096 colours is probably 4000 more than you need when more depth in gameplay and involvement is called for.

✪ ✪ ✪

● Yes, there's 4096 colours kicking around in there – just one of the several inter-level screens. Pity it's not a backdrop to the action.

INTERNATIONAL KARATE +

SYSTEM 3

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***International Karate* made it's debut in 1985 and soon earning the reputation of being the last word in beat-'em-ups. The sequel, *IK+*, has a new feature – a third, computer controlled, opponent.**

● **GAMEPLAY**

IK+ is a one or two-player game divided into two rounds: combat and bonus. Using different joystick combinations each player can produce 17 different manoeuvres such as punch, kick, block, head-butt, jump and move left or right.

The idea is simply to knock out your opponent by whatever means possible. At the end of the round the loser is dropped (unless there's a tie), his place taken by another computer opponent. Then it's on to the next round...

After a few combat rounds the bonus level appears, with each human player competing against either bouncing balls (and severed heads) or exploding bombs. The game ends when only the computer opponents remain.

● **GRAPHICS AND SOUND**

IK+ might have gained a third player, but the action now takes place against just the one backdrop. There are, though, some animated background sequences, including falling leaves, flying fish and even a crawling worm.

The sound effects are great, conjuring up the the atmosphere of those chronic 1970's martial arts films perfectly.

● **OTHER VERSIONS**

Available on 8-bit formats for some time, *IK+* can now be found on Ocean's *We Are The Champions* compilation. The Amiga version should be out shortly.

● **EXPRESS VERDICT**

IK+ is the best beat'em-up to date, lacking only long-term interest – which can be offset using the two-player option. This aside, *IK+* is an enjoyable game.

✪ ✪ ✪ ✪

● One beat-em-up the sun will never go down on...

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The 68000's other instructions

The 68000 assembly language instruction set is so large that certain functions are duplicated. Here is a list of the most efficient instructions with their counterparts:

MOVEQ.L #0, *register*
instead of CLR.L *register*
ADD.W *register, register*
instead of MULS #2, *register*
SUB.W *register, register*
instead of DIVS #2, *register*
TST.L *register*
instead of CMPI.L #0, *register*

Time-saver software

You may think the £10 – £20 extra for an internal clock on your Amiga memory upgrade a bit rich. However, there is an easier way of saving the clock time.

Assuming you have correctly set the time and date type from the CLI "#d df0:s/ startup-sequence". This will save the time and date onto disc. When you reboot at a later stage of the day all you have to set is the time using DATE 14:30.

When you start again tomorrow you must reset the date using DATE tomorrow 9:00 then type "Σd df0:s/startup-sequence"

In the MODE for monitors

Most PC users may be familiar with the MODE command in MS-DOS for switching between various screen modes, or possibly for controlling the serial port.

However, there is another, less familiar use.

Many PC monitors do not have a horizontal hold switch, which can mean you display being slightly off-centre on the monitor.

MODE allows you move the entire display to the right or left using either of the following:

MODE ,r
MODE ,l

The comma signifiies the missing operand for the display modes (40, 80-column text, colour etc). You can include this operand if you wish.

To help you get things lined up properly, you can also use a test pattern:

MODE ,r,t

This shifts the screen one character right, and MS-DOS will then ask if alignment is correct. Typing Y ends the process, while typing N shifts everything one more space and repeats.

You can include the command in AUTOEXEC.BAT file to have this done automatically at start-up if you wish, although if your display is badly off-centre you'll need to perform multiple MODE commands since you can't specify the number of spaces to be shifted.

More info on Amiga INFO

Use of the Amiga's INFO command, either from Workbench or from the CLI, can be frustrating since it always seems to give you information on the disk currently in the drive. This isn't particularly useful, since you'll almost certainly want information about some other disk – usually to see if there's enough space to copy a file.

The way round this is to use the command from the CLI in the form:

INFO ?

The query (?) asks the Amiga for the correct syntax of the command, and any necessary parameters. In this case, AmigaDOS will respond with "none", because there are no other parameters. However, this pauses execution of the command until you type return.

So now, simply remove your Workbench disk, insert the disk you actual want INFO to operate on, then press return. You'll actually get INFO on the disk you want.

Get SET for protection

If you've ever blithely issued an ERA *.* command on your PCW, only later to realise that there really was something on your disk you wanted to keep, this one's for you.

You can write-protect individual files quite simply using the SET.COM utility (you knew there had to be some purpose for it).

First, copy SET.COM from your CP/M master disks to the RAM disk using PIP M:=SET.COM.

Then insert the disk containing the file you want to protect and enter M: SET *filename* [RO], thus making it read-only.

Wildcards are allowed in the filename, so you could, for example, protect all the chapters of your great 20th Century Novel with the command M: SET *novel.** [RO].

Files treated in this way cannot be erased, although they can be destroyed by formatting the disk.

To un-protect them, also use SET.COM, in the form M:SET *filename* [RW].

Commodore's joystick japes

An old one this, but it still catches a lot of people out: beware the auto-firing joystick.

Because the C64's joystick port is handled by the same I/O chip as the keyboard, strange things can happen.

The usual scenario is, after a hard night's blasting the living daylights out of alien scum, you return to the 64 the next day and turn on your machine.

As you begin typing spurious characters appear on the screen. Usually, you put this down to your fumble-fingered typing, delete it, and start again. More random characters.

"Argh!" you cry. "My keyboard has had a mental breakdown."

Not a bit of it. You'll probably find you've simply left your joystick's autofire switched on. turn it off and all will be well again.

Similar things can happen if you leave your joystick plugged in with something resting on it (your foot, perhaps). If the handle is off centre it will also send spurious codes to the 64, confusing the hell out of the poor beast.

Animating Neochrome

I have recently found out about the "little known" animation facility of *Neochrome* by Atari Corp. By selecting the animation facility from clicking with the right mouse button in the hole of the R of GRABBER. You are then presented with six bars with four containing xx and two saying ADD and DEL.

First load in your picture, *e g* the Dire Straits picture you get with the computer. With the mouse outline the area which you wish to animate. Now press "add". The current picture is now the first frame of your animation sequence.

The area you outlined should be black, so now press the right mouse button. You can now either alter the picture normally or move the area by moving the mouse while holding the button. After you have changed the picture press ADD once more. This is your second frame.

You can make up to 99 frames.

Once you have finished rewind the sequence by clicking on the box next to ADD. To run each frame click on the centre outlined box. You can load or save the sequence by clicking on the appropriate function on the left.

The dead zones of the PC keyboard

One of the great things about the PC keyboard is that with the various combinations of ALT, SHIFT and CTRL, you can normally assign a multitude of functions to each key.

However, there are one or two dead zones, and some are quite peculiar. For example CTRL will not work with any of the top row number keys (except 2, 6 and -), nor with the keypad keys 8, 5, 2, -, +, Ins and Del.

CTRL-TAB does nothing, nor does ALT-TAB, ALT-ESC, ALT-bs or ALT-ENTER.

A good reference source for extended keycodes is any of Borland's *Turbo* manuals.

THE ULTIMATE CHEAT

Stuck on *Ultima IV*? Having difficulty getting the locals to tell you anything useful? Ve haff vays of mekking zem tok!

At least on the PC versions (and there's no reason to assume that other formats aren't the same) all of the characters' conversations are stored in a series of files with the TLK extension.

So to view them, simply TYPE them to the screen, or copy them to the printer picking out such useful snippets as the locations of the shrines and stones, and the very mantras themselves.

This is not an instant victory, if only because you still have to be a jolly active adventure to become an avatar, but it should make life easier.

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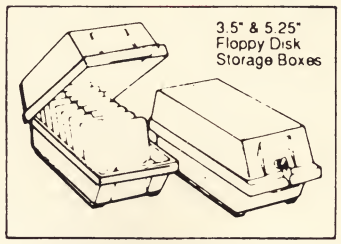

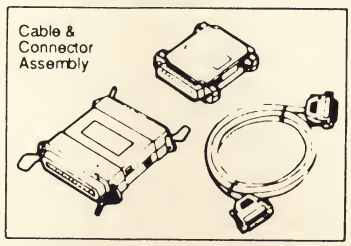

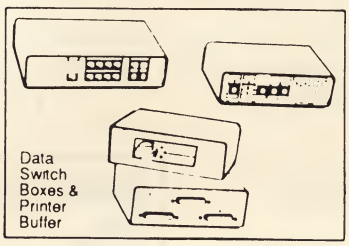

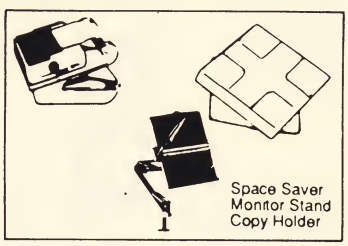

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ST

Business or pleasure

What has happened to Atari's much-hyped business push for the ST? The latest bundling deal doesn't exactly do much for the ST's serious image; 21 games, joystick plus organiser software. Even this month's Atari User Show at Alexandra palace is aimed at games players.

Atari won't argue the point: it's booked lots of floor space, a large proportion of which will house an amusement arcade. No mention, of course, of the Hyper series, Microsoft Write or the portable ST.

The Hyper series, when released, is designed for serious users. Targeted primarily at Mega STers (although there isn't any reason why 520 and 1040 owners shouldn't join in the fun), the series includes HyperPaint, HyperChart, HyperDraw, HyperPlan and HyperProject. Hurry up Atari - get these products out! If HyperChart is as good as Davrelle's PC version (and the others live up to the hype), the ST just might be treated as a serious business machine. And not something simply for shooting sloshed Santas from the sky.

DTP Update

Not so long ago AMS were a force to be reckoned with. When a new product arrived from them – usually after several name changes – it was generally raved about and worth the wait. What of their first ST product which has been waiting in the wind for over six months? Yes, it too has been subjected to a name change from Finesse Paint to Flair Paint. Hopefully the package won't go the way of the machine.

AMS is slowly losing its identity since amalgamating with Logitech. Logitech deal in PC paraphernalia and Logitech wants AMS to do the same. There was talk that all AMS's non-PC software would have to go. Flair Paint too. However, the latest news – and it is good news – is that Flair Paint will be coming under the AMS label.

Most DTP software suffers from awful picture editing facilities. Enter Flair. It sits in memory as an accessory and offers the DTP user shape drawing, image shrinking and stretching, huge draw area, picture magnification – in short, everything. I saw Flair at the previous Atari show and was impress-ed by its speed and features. Get the product out quickly, AMS – before Logitech decides differently.

On the subject of DTP; DMC's Calamus was originally to be distributed in the UK by Signa, but it now seems that Atari has won the contract. Good news. Calamus boasts a built-in text editor and drawing package, allows text to viewed at up to 300 dots per inch and has true WYSIWYG output. According to Les Player, Atari's technical support manager, the package should be ready for Christmas priced £399.

All is confusion

Turbo Cup, one of the latest French-brewed titles to be distributed by Loriciels UK, comes with a Porsche 944 – model, that is. What will Boots and Smiths make of the package?

Starglider II, which was supposed to come on the dual format disk conceived by Jez San and his Argonauts, confused the hell out of these stores, according to Rainbird. Having both ST and Amiga on one label proved too much of a dilemma. One which Boots and Smiths couldn't handle. They demanded, instead, that Starglider appear in separate ST and Amiga versions – none of this dual format nonsense. Sheesh! Who are these guys?

Finally, a tip for Space Racer from Loriciels. This one should make it onto the shelves without a second thought. Burning around on a jet cycle dodging pillars and wasting opponents is fun, but a little tricky. Press F2 to pause the game, F10 and finally space to skip a level.

Richard Monteiro

Fontastic formatting

Scientific and academic users of the ST will be delighted to learn of a source for Tex and Metafont, the popular document formatting and text processing programs in those communities and more usually found on Unix workstations.

German publisher Tools has various implementations of both programs - with English documentation - at prices between about £70 and £100. They will run on any ST with 1Mb or more of memory, and support most popular printers including the H-P LaserJet and Atari's own SLM804.

More details from Tools GmbH, Kessenicher Strasse 108, D-5300, Bonn 1, Federal Republic of Germany.

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- Exeter 1987 - still a key point on a summer Saturday, with busy holiday traffic on the Great Western main line, plus Waterloo, Barnstaple and Exmouth services. The remodelled station layout made some things easier, but at times you may wish you could build more platforms!
- Burlington Northern - our first simulation of North AMerican practice, this features the single-track bottleneck line between Spokane (Washington) and Sandpoint (Idaho) in the American North-West. Use your discretion to side-track manifests to let Amtrak and priority intermodal services pass unhindered. Glossary of American terminology provided!

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PC UPDATE

Stop AT Nothing

When IBM trumpeted the Micro Channel as the saviour of the PC industry 18 months ago, plenty of players in the PC clone league were happy enough to toe the line. One after another they negotiated with Big Blue to licence the new architecture and jump on the MCA bandwagon – even our beloved Amstrad was seen to approach the cyan-tinted doors.

Time passed, and it became increasingly apparent that users were unhappy to bin their ATs and existing software in favour of a system with dubious benefits for them but obvious ones for IBM.

Lots of people see MCA as a marketing ploy rather than the next generation of PC system bus, and clone makers are showing their traditional pragmatism by giving the public what they want. It remains to be seen if what they want is EISA.

The Extended Industry Standard Architecture is the alternative to MCA put together by a conglomerate of hardware and software companies. Most are American, and most are big names like Compaq, Tandy and Zenith. EISA's main advantage is compatibility with the existing AT bus, which just about all the 286 and 386 PCs use.

With EISA you don't have to throw away your current expansion cards and software, but can still take advantage of many of the heralded advances of MCA, including a full 32 bit address bus and OS/2 (if you have the memory).

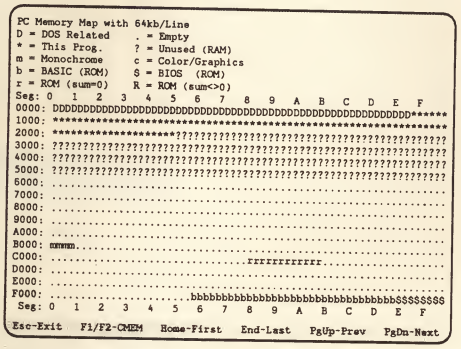
The only snag, so far, is that the new architecture is probably further into the future than MCA, with the first machines not due until the second half of '89. Still it's good to know that some of the major PC makers dare to say "I think, therefore I question IBM." (just one of many unflattering plays on Big Blue's latest ad campaign, "I think therefore IBM". A personal favourite is "I'm thick, therefore IBM".)

Not many people know...

If you want to delete a directory (eg CALIFORN and its contents from a disk, you can type DEL CALIFORN from the parent directory, rather than having to CD into CALIFORN do a DEL *.* and CD back out. The 'Are you sure' message still appears, and you still need to RD (Remove Directory) the directory name afterwards.

Who's counting?

California 10 Pak is a collection of 16 DOS utilities. This says little for the guy who named the suite but adds to its value as a PC tool. The pack is a collection of goodies aimed mainly at the programmer but with a passing word for the everyday user who likes to know what's going on inside the machine.


PC Memory Map with 64kb/Line
D = DOS Related . = Empty
* = This Prog. ? = Unused (RAM)
m = Monochrome c = Color/Graphics
b = BASIC (ROM) S = BIOS (ROM)
r = ROM (sum=0) R = ROM (sum<>0)
Esc-Exit F1/F2-CMEM Home-First End-Last PgUp-Prev PgDn-Next

● One of the many disk display screens Paked into the California 10

The programs can be grouped into three areas: 'everyday use', 'occasional use' and 'use if you blitz a file/disk and are desperate'. The first category includes a front-end menu with help screens, which simplifies DOS without getting in the way like GEM (the colour scheme's vile, though).

There's also a souped up directory display which can sort on filename, filetype, size or date, a couple of utilities for comparing files (good for checking dodgy copies) and a string search routine for text or hex files.

Text and hex files can also be viewed with two of the utilities in the 'occasional' group and there's also a memory and disk viewer.

The final set includes a disassembler for COM and EXE files, which puts the disassembly on disks, a FAT and disk sector viewer and a machine configuration display which looks good in the manual but for some unknown reason hung the Amstrad 1512 every time.

The one obvious omission is a disk sector editor, as opposed to viewer. It's nice to see what's wrong, but rather handier to have the option to put it right. Price is £79 and further details can be had from CSPI on 0753 4127879.

Simon Williams

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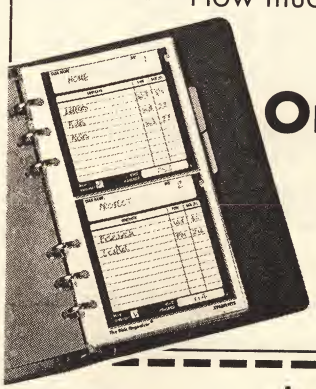

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AMIGA BLITZ

In the picture

The Amiga was one of the undoubted stars of the recent Computer Graphics show. Although it may not be up to the standard of some of the machines present, it certainly showed that you can produce professional graphics on systems costing less than £10,000.

Of the more affordable products, notably a genlock device from Applied Systems and Peripherals at the astounding price of £114. Running on both the A500 and A2000 systems, this undercuts existing genlock devices by at least £100. (Commodore's own genlock board for the A2000 currently costs around £250).

Further back up the price scale, Cotron had a 14" colour monitor at £650 for use with Microway's Flicker Fixer which eliminates the eye-wrenching screen flicking in the Amiga's interlaced mode. A special monitor like the Cotron unit is necessary because ordinary monitors do not have a sufficiently high display frequency to cope with the extra scan lines.

Perhaps of more general interest was the appearance of grey-imported add-on processor boards featuring the top range Motorola processors. One is the soon-to-be-released A2620 board from Commodore which features a 68020 processor and will sell for £1,405, while the other was CSA's 68030 board. Both cards really kick in the afterburners and leave standard Amigas for dead.

Workbench 1.3

The on-going saga of Workbench 1.3 is still unresolved. Although Commodore had promised to have the upgrade here by "the autumn", here we are at the end of October and still no sign of it (watch the news pages - Ed)

Informed opinion says 1.3 is a non-essential upgrade - in other words, it might be nice to have some of the new features (and some of them sound rather nice indeed) but it won't be severely handicapping your Amiga if you don't get it.

However, for true Amiga buffs and the merely curious, there are a couple of ways to get your hands on it right now. One is to check out some of the latest US-originated software which has Workbench 1.3 on it. The other way is to ask an American penpal to buy a copy for you.

Yes, Workebench 1.3 is available in US retailers, priced around $30.

Incidentally, although it might be "non-essential", Commodore US obviously thinks it's worth releasing; why are European users getting second-class service?

Acorn meets Amiga

On a brief visit to Ariadne Software I saw a preview of a product called Beebulator.

This brilliant emulator lets an Amiga run any program written for the BBC Micro, regardless of whether they're in Basic or machine code.

The product is to be launched by Commodore in January and while it will obviously boost Commodore's drive to get the Amiga into schools and colleges, it can only enhance the general appeal of the Amiga, and not just among members of the BBC fraternity who are thinking of upgrading to a new machine.

Interestingly, the Beebulator throws some light on a general Amiga problem. Someone had complained to me about the slow scrolling on the Amiga when playing the Federation II multi-user game (MUG) on Compunet. Apparently, 64 users manage to respond more quickly than Amiga players.

But seeing a BBC program listing race up the Amiga screen under Beebulator confirms that the problem is caused by the console device in AmigaDos used for standard screen displays. It can easily be avoided by good programmers.

On the subject of Compunet, Nick Green, who originally conceived the system, has just taken over the management, so I expect to see some interesting developments before long.

John Collins

V1.3 main command changes

ALIAS Allows CLI commands and extensions to be renamed with a string, eg, instead of DIR A, you could use FULLDIR to get a complete file list.

AVAIL Shows the amount of free chip and expanded memory available.

FORMAT New option allows quick formatting of old, already formatted disks - faster than erasing them.

GRAPHICDUMP Dumps the front window to printer, with a delay so another window can be selected before printing starts.

MORE Extended TYPE command, allows file display a screen at a time, with forward and backward scrolling and limited string searches.

RESIDENT Allows certain programs to made memory-resident: a big plus since you can now make CLI commands memory-resident, using them without constant disk swaps or using the RAM disk.

WHICH Searches for a file on any disk and will identify its location in directories.

Growing pains

Programmers, (to tweak Parkinsons Law) expand their programs to fill the memory available. At the time of the launch of the QL, a multitasking system with 128K for £400 was quite something. PSION managed (just) to crush their programs into it and left a minute amount for data!

Not so today - never mind a measly 128K being insufficient, a publishing package in development currently is likely to be at home with its recommended text editor only on systems with 890K expansion cards.

Superbasic compilers are largely the reason. No longer does the programmer have to wrestle with 68000 assembler, or burn the midnight oil trying to cut an excess 100 bytes from his code to make it fit. Write it in Superbasic, compile it and Hey Presto! a machine code program. If it doesn't fit - call it an advanced version and sell it for expanded machines only.

This evolution in QL offerings is not without its benefits. It is only now, as pundits declare the QL death throes that many quality packages are reaching the market. Despite all the predictions the QL is holding its own. More than a few companies are making a healthy living from the QL market alone.

The owners with a basic machine must be content with the cut-down offerings these days along the lines of the 1512 specials that appeared for the Amstrad PC. If that market is anything to go by, makers of memory expansions should be gearing up for the run on their products. Without a doubt, it looks as if the big QL program is here to stay.

Games at source

A small Finnish software house has launched a new platform-type game: Spaceman Sam - the source code! The game is on offer at £13 but for an extra £57 you get the full assembler source code plus the in-house screen and sprite designer systems.

After an hour battling to get the intrepid Sam to achieve his target I think I need the source code to find out how to progress to the next level!

Details from Aholasoft, Kirjurintie 3, SF-05400 Jokela, Finland.

Expansion news

With the Futura becoming a "might have been" and the outlook for the CST Thor XVI unclear, news of a DIY upgrade for the main QL board comes as a welcome surprise.

Quanta member Mike Lilley released details of the new board which cures many of the major niggles of the original design. Switched 128/512K main memory, parallel port, reliable battery backed clock, multiple switched ROM sockets, standard keyboard connectors and five expansion ports are standard features. In development are the hard disk interface, modem card and ports boards.

Prices and availability are not yet confirmed but are expected to be sub £100 for a board needing some populating. Details from Mike Lilley on Royston 61236.

Sector spurs comms growth

QL communications has gained a new lease of life following the launch of the Sector Bulletin Board running the Q-View software. Its success has made other commercial companies look closely, with the Super User Bureau on-line from mid-September and Digital Precision boss Freddy Vaccha confirming recently that DP is likely to have a board running soon.

Sector has melded its commercial interest and simple QL user support well, keeping any "hard sell" well away from the message pages. Apart from the public board, it provides programming hints, news and advice. No longer do QL-ers have to reside as a Special Interest Group (SIG) in the "naughty corner" of other peoples boards.

Other boards with a currently active QL SIG are Peacenet on 0895-448998 and Gnome at Home on 01-888-8894. Both are viewdata at 1200/75.

Sectors Board runs on 0772-454328 after 6pm and weekends.

Paul R. Connell

Cringing pologies to all Spectrum owners, but due to circumstances beyond our control we are unable to bring you the Spectrum column for this dummy issue. The person responsible has been chastised with various implements of destruction and normal service will be initiated as soon as possible (ie, next week).

In the meantime, if you have any Spectrum news, views, or information you'd like to share, write to SPEX, at New Computer Express - ASAP.

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CPC centre

Been feeling depressed about the prospects for your CPC lately? Fear not, because despite the cries of the doomsayers of the last year, there's new life in Amstrad's oldest computer.

It is thoroughly heartening to see Mr Sugar's new advertising for the CPC Computer System, a packaging deal that ought to ensure plenty of newcomers to the fold this Christmas.

Basically, for less than the price of one of the newer 16-bit wonders you get a complete computer system - and the rest.

£500 will buy a 6128 with disk drive, colour monitor with TV tuner (so you need never miss Neighbours again), and a radio alarm clock (to remind you when Kylie is due to appear). There's also a 17-game compilation including old faves like Scrabble and Trivial Pursuit. Oh, and a joystick. And a desk to put everything on, in and under.

But since you've already got a CPC, you'll probably be more interested in the list of forthcoming software goodies, and some excellent stuff it is too.

Heading up the list must be Mediagenic's conversions of two classic coin-ops - Afterburner and R-Type. SDI is also coming from the same source.

Also on the coin-op front, Imagine is promising Typhoon, Guerilla War and Road as well as what promises to be one of the smash hits of this Christmas, Operation Wolf.

Telecomsoft has Savage, a dungeon-delving hack 'em up in arcade style.

The more thoughtful among you should be kept busy with two recent releases from Level 9: Ingrid's Back and the excellent Lancelot, and Magnetic Scrolls should soon release the extremely bizarre Fish! - in which you play, hey!, a goldfish in a plot of intergalactic double-dealing and intrique (would we make this up!).

Finally, role-play fans can look forward to Pools of Radiance, the US Gold/SSI conversion of the classic Advanced Dungeons & Dragons game system.

Impressive or what?

Amos Walker

SECTOR 64 SECTOR

Gunning for the cowboys

There has been recent controversy over various cowboy repair outfits performing unsatisfactory repairs on C64 hardware at extortionate prices. Fortunately help is at hand in the form of the Independent Commodore Products Users Group (ICPUG) which is running a regular round-up of repair sharks (and providers of good service).

If you need repairs to Commodore kit, it could save you a lot of hardship if you check it out first, and if you've been ripped off ICPUG would love to know.

Membership to ICPUG provides other useful features such as programming advice and tips, hardware and software reviews and discounts. ICPUG memberships costs £10 a year with a £1 entry fee for which includes a one year subscription to the club's bi-monthly newsletter.

For further details contact: ICPUG Membership Secretary, Jack B Cohen, 30 Brancaster Road, Newbury Park, Ilford, Essex IG2 7EP alternatively telephone (01) 590 8849 during normal office hours or (01) 346 0050 at evenings and weekends.

On-line aid

Another source of information and services is Compunet, the bulletin board originally available to C64 users only (but since expanded to cover the 16-bit upstarts, the Amiga and ST). Membership to Compunet provides you with access to news, advice and tips, on-line communication with other users (party-line) and the opportunity to download software.

This software can be professionally produced (such as previews of forthcoming games) or programs provided by fellow members. Occasionally a real gem of a utility can be downloaded - it's a question of finding them.

Fortunately most UK users can access Compunet at local call rates. If you're interested contact Jane Firbank on (01) 997 2591 or write to Unit 26, Sheraton Business Centre, Wadsworth Road, Perivale, Middlesex UB6 7JB.

It's show time (again)

Hot on the heels of the PC Show extravaganza at Earl's Court, the 12th Official Commodore Computer Show, returns to its popular and more homely venue later this month.

With over 75 exhibitors displaying their latest software and hardware across the entire Commodore range, you should find something of interest and perhaps even a bargain or two.

The show will be held at the Novotel, Hammersmith, London W6 from Friday, November 18 to Sunday. Details can be obtained from Database Exhibitions, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP. Alternatively you can telephone Show Hotline on (0625) 879920.

Rick O'Shea

PCW PATCH

More than a typewriter

Welcome to the first PCW Patch. Usually we'll be talking about PCW news, software and technical hints and tips, but we decided to begin by dispelling a few myths.

Most people who have heard of the PCW think of it as just a word processor. But not only are they highly efficient at this task, they also excel as personal computers with a large range of first-class software.

The PCWs come as a complete system, with monitor and system unit, keyboard and printer. When the machine was first conceived, Amstrad and Locomotive Software agreed to marry the hardware and software into an easy-to-use system for word processing.

The keyboard has all the usual alphanumeric and punctuation keys, but also a host of definable and dedicated function keys. This is where the PCW/Locoscript combination really scores over other word processors - when you need to perform any WP function - find & replace, or moving through the document - you don't have to remember complex commands. Just press the appropriate key.

To make things even easier, Locoscript uses a series of pull-down menus for the most common commands. The simple us of the cursor keys and ENTER makes Locoscript menus a powerful way of learning the software, but once you find your way around menus can slow you down. So, experts can clear the menus and revert to use of keyboard shortcuts.

There are two models in the 8000 series which come equipped with a dot-matrix printer which allows you to create graphics and use different fonts while still producing reasonable quality type.

The 9512 looks different, with the styling of the case looking more like a PC-compatible. Functionally, it is the same as the 8000 series, but comes with a daisywheel printer which produces much higher quality type, but does not allow you to print graphics - no good for desktop publishing (although you can add a dot-matrix printer of your own).

The PCW range may not have the technical features of machines like the ST and the Amiga, but for people who require a powerful but economical computer system for use in the home or office, it is hard to beat.

Classic trio saved

Three of the best PCW programs have been saved from extinction by Copy Comm Software. The company has negotiated the rights to two of Infocom's finest: Hitch-Hiker's Guide to the Galaxy, and Leather Goddesses of Phobos, both priced at £24.95 which have been dropped by official distributor Mediagenic.

And if solving intergalactic puzzles is not your bag, try programming in dBase II. Copy Comm also has the world's Number 1 database on the PCW after previous distributor First Software pulled out of the business. Price is £67.95.

More details from Copy Comm on 0337-7444.

Dave Axford
Chris Bryant

Hit the Flipper

Perhaps the single most irritating thing about the PCW is the fact that while most software runs under the CP/M operating system, Locoscript - the key program - doesn't.

This means that if you want to switch from Locoscript to another program you have to switch off your machine and re-boot with a CP/M system disk.

Or at least, you did until now. With Flipper you can effectively split your PCW into two, having Locoscript in one segment and CP/M in another, or even having two CP/M segments.

This allows you to switch instantly (well, three seconds) from Locoscript into a CP/M program, and then back again without losing your work, or even without losing your place in the Locoscript document.

It will work on any PCW with 512K of RAM, and at 5p under £25 including postage, Flipper must be an essential purchase.

One of those programs that transforms your computer and makes you wonder how you ever got along without it.

More details from Software Imperative, Ashleigh House, Bussage, Stroud, Gloucs GL6 8AZ, or tel 0453-886931.

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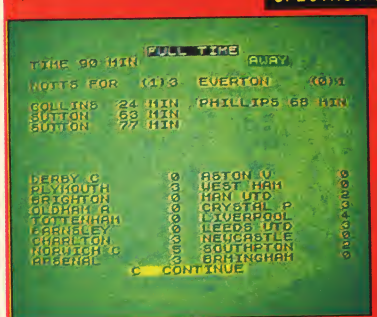

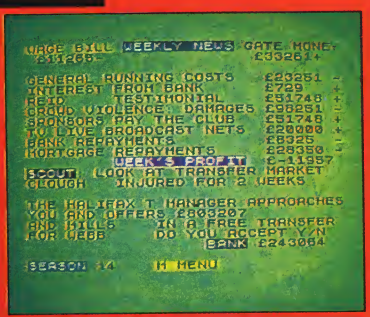

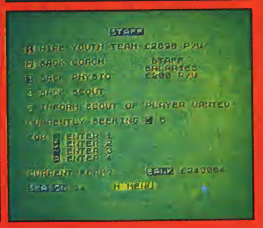

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BEEB BOX

Classic collection

CDS software has just announced a deal with Superior Software to re-release 15 classic Superior games on the Blue Ribbon budget label. Titles such as *Crazee Rider*, *Stryker's Run* and *Codename Droid* will now be available on dual-format BBC/Electron cassette, retailing at £2.99 each.

Richard Hanson, Superior Software's MD, commented: "The time is right for our superb range of games to enter the budget arena".

The games are scheduled for a staggered release, four titles at a time - with all 15 due within the next year. The first batch of games (*Percy Penguin*, *Mr Wiz*, *Repton* and *Karate Combat*) will be on sale at the beginning of November.

Superior has also launched a *new full-price game called By Fair Means Or Foul* for the BBC/Electron. *BFMOF* is a boxing simulation with the ability to cheat, provided the referee doesn't notice!. Available now on BBC cassette (£9.95), BBC 5.25" disk (£11.95), 3.5" disk (£14.95) and Electron cassette (£9.95).

Power computing

SJ Research is currently developing a system capable of running UNIX and MS-DOS programs on the Econet network, using BBC micros as terminals.

SJ Research are convinced their system provides schools with the best of both worlds - a wide range of UNIX/MS-DOS software able to run on existing BBC hardware.

Release date and price details have yet to be fixed but you'll get details as soon as we do.

Two for the show

The Electron and BBC Micro User Show, the premier Acorn exhibition, returns to its popular London venue later this month. With some 70 exhibitors displaying their latest software and hardware across the entire Acorn range, you should find something of interest and perhaps even a bargain or two. Experts will be at hand to answer your questions and give advice on a wide range of technical matters.

This, the 20th show, sees the addition of a new feature - Innovation Row - where you will be able to view the grand finalists' ideas and help decide on the winner.

The show will be held at the New Horticultural Hall, Greycoat Street, London SW1 from Friday, November 11th to Sunday, November 13th.

The doors open at 10:00am and close at 6:00pm (4:00pm on Sunday).

Entrance fees are £5 for adults and £3.50 for under-16s, although by ordering tickets in advance you'll be able to save yourself £1 per ticket. Details can be obtained from Database Exhibitions, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP.

Alternatively telephone Show Hotline on (0625) 879920.

Andrew Reece

MSX TRA

New hardware

MSX users, might be forgiven for thinking that they are being ignored by the computer press in the UK. With the publishing of Express, however, this state of affairs is over, and MSX users will now have access to information about a far-from-dead format.

First, there is news from Japan regarding ASCII's latest computer. This is the MSX 2+ machine, and although details at the moment are rather sketchy, it is believed to have improved disk handling, a choice of 20,000 colours, and an eight channel sound chip. The processor used remains a mystery - it may still be the humble Z80, or a faster variant. More details on this machine will be given when it reaches Europe. There are no details as yet of a UK launch.

We also have news, this time from Germany, of a soon to be released hard disk for the MSX 2. This will be a 20 Mb drive, designated the HD-20, with a proposed UK price of between £200 and £300. This price, if correct, will make these drives the cheapest yet available for a home computer - not counting floppies, of course.

Into the Valley

Moving away from hardware and over to the software scene now, all of you eagerly awaiting the release of Konami's *Kings Valley 2* won't have to wait much longer. The launch date is now some time in November, so even as you read this the game may be available. A review should follow shortly, so watch this space.

Two games worth looking out for are *Game Over 2* from Dynamic, and *Afterburner* by Mediagenic. Lets hope they live

up to expectations. These are just a few of the titles soon to be released on the MSX system, so even though hardware support in the UK has almost disappeared, the software houses are continuing to convert titles for the MSX.

Conversion blues

Talking of conversions, two pieces of software I have seen recently seem to be taking the dumping of Z80 code from the Spectrum a little too far. *Colossus 4 Chess* from CDS, and *Hunt For Red October* from Argus Press Software are both let down by poor graphics. *Colossus 4* plays a really mean game of chess and offers comprehensive options, making the game the most difficult I've played on the MSX. The screen display on the other hand is possibly the worst.

The same can be said for *Red October* - the coding seems to be pure Sinclair Spectrum, even down to the limiting the display options due to the Spectrum's lack of memory. Surely with the MSX's 64K of main memory and 16K of video memory we could at least have a version that matches that on the Commodore 64? Two good pieces of software that could have been better.

Still on conversions, I have just seen some screen shots in a Japanese MSX magazine, and some of the graphics just have to be seen to be believed. You should see the screen shots of the Japanese version of *Zoids*. In Japan this game is available on cartridge, and has obviously been rewritten by the Japanese programmers.

If any of you MSX games players have any pokes, hints or tips, please, don't keep them to yourself. Write in and share them with your fellow MSXers. Even the best games players sometimes need a prod in the right direction.

Keith Neal

The Write Stuff

In the first issue of every magazine (like this one) you'll find an article (like this one) asking for contributions from the readers (like you lot). Why should Express be any different?

And why, indeed, should you bother? After all, aren't you paying us to write the magazine for you? Well, yes - but with your help we can make it even better.

For one thing, try as we might, there's no way we can review every software and hardware product that gets released. The industry is just too big now. And to keep Express topical, we have to review things quickly. But when you use products, day after day, you uncover the bugs, and the useful shortcuts, and sometimes there are basic design flaws that only become apparent after extensive use.

Don't keep them to yourself: share them with your fellow Express readers via Tech Tips, our column for helpful hints.

Furthermore, it's a certainty that among our readers, there exists an untapped source of expertise in all sorts of areas - graphics, sound, communications. Perhaps you'd care to write about it - drop a line to the editor.

But even if you haven't got experience, we're sure you've got opinions. Share them via Express Mail, our letters page, the fastest way of getting your message across to your fellow users. And there'll be a weekly prize for the author of the wittiest, most interesting, or thought-provoking letter. Starting a user group? Or looking for one to join? Stick a note in the Express Mailbox .

Problems of a technical nature can be addressed to Doc File, our resident medic/psychiatrist for problematic computers and their depressed owners. If you're in trouble with a recalcitrant RS232 connection, or waging a losing battle with your printer DIP switches, write to the Doc.

If you don't feel qualified to participate in such learned discourse, write to Learning Curve, our weekly slot for beginners. We'll be covering all of the basics, plus some more advanced topics, in future issues, but if there's something baffling you right now, write now.

It's news to us

Hardware manufacturers, software publishers, retailers: to get your products into the Express news pages you don't need a glamorous PR firm to buy us lunch at the Savoy (although it helps). Nor do you need to send a sheaf of press releases in a glossy folder with colour photographs (we'd rather have lunch at the Savoy). Just let us know about new products, price changes - anything of interest to computer users is news to us. Write, fax (0225 446019) or phone (0225 446034) and talk to Colin Campbell or Peter Worlock.

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A last look at the events of the week, by cynical old hack *Private I*

He's the greatest (he says)

"The most important man in the games industry? Oh it's *definitely* me - it always was, but no one ever realised!"

And just who is making this self-effacing claim? Geoff Brown, the boss of US Gold. Maybe Ocean chairman David Ward. Or even one of those gung holier than thou Yankees like MicroProse's Bill Stealey?

But no. The most important man etc etc is Nick Alexander - and don't say "Nick Who?". Not content with being the nephew of the Tory grandee Norman St John Stevas, witty St Nick now reckons he heads the games pile by courtesy of the Virgin takeover of Mastertronic.

"With Mastertronic, Bulldog, Ricochet, Arcadia, Virgin, Leisure Genius, Melbourne House and Sega, we're now the biggest firm in the industry and are active in every single sector of the games market."

Hardware manufacturing?

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And shows?

"Aside from shows."

And peripherals.

"Well we do sell those and Mastertronic used to make joysticks."

And magazines?

"OK, and magazines. But we do everything else and sell more than any other firm. And every single sector is growing strongly at the expense of all the other sectors - unless that's the one we're talking about at the time. As the head of the whole firm, that should make me the most important man in the industry.

"Except for the punters. They're *really* important.

"Oh, and the retailers.

"And the journalists.

"But aside from all them, then I'm the -"

The droll fellow has staked his claim. This one could run and run.

No accounting for taste

News that the Archimedes is selling well to Italian schools serves to highlight the exotic nature of both education and computing in foreign parts. They really do do things differently over there.

Not content with having as its Italian distributor the 1808-established G Ricordi & Co (you know them: "one of the world's major classical music and opera publishers"), Acorn has also tied up a deal with the grandly named Instituto Tecnico Statale Commerciale Vincenzo Comi. This loosely translates to Grange Hill Comp, apparently, and is a "technical school for accountants".

These budding accountants are just 14-18 years old and not only do they have to deal with the brain-numbing subjects of double entry bookkeeping and other financial stunners, but they also have to do it on Archies.

Sometimes double Math on a Monday doesn't sound so bad.

Germanic depression

Potential PCW buyers beware. Faced with considerable shortages, a batch of the old Amstraddian workhorses has been shipped over from Germany. The problem is not that LocoScript and the manual have been written in that determinedly weird German Shoveitalltogether withStrangecapitalsLanguage, but rather that the printer and expansion ports are different.

Alan "It's the chips, I tell you" Sugar's outfit is taking the line that it's "all bloody nonsense", and that there are no difficulties.

Well *that's* all right, then...

Tweedledee and Tweedledum dept

That pair of hardware bookends Commodore and Atari really aren't quite the same despite giving the distinct impression of being two halves of the same outfit, there are subtle and revealing differences.

Take the States. Phone Atari out of hours and you're greeted with one of those naggingly cheerful recorded voices, extolling special offers on VCS and ST machines.

And Commodore? You get a sturdy, brusque security guard, demanding to know why you've been rash enough to phone...

Shoot from the Lip...

People who buy these games aren't of our generation. They listen to Wet Wet Wet records and Duran Duran.

Alternative Software on naming its new label Again Again

For discerning Amiga and PC owners everywhere (sorry, ST owners, your computer couldn't handle the graphics!)

Martech press release for Phantom Fighter

If girls want knitting programs we'll write knitting programs and if they want shoot "em ups with no male presence we'll do that. I don't want to sound 'right on' or anything but we don't want to be a patronising software house."

Leslie Bunder of Audiogenic

It concerns me that some of the so-called captains of our industry continue to launch new products and make new promises without having the ability to deliver.

Commodore UK boss Steve Franklin

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R-Type - is it your type?

One of the year's arcade hits, Mediagenic's R-Type has much imitated. Check out the genuine 16-bit conversions of the game that promises to be one of the smash hits of this Christmas.

Back to Basics

Everybody's first language went out of fashion for a while, superceded by modern replacements like C and Modula-2. But Basic is back. On machines like the Amiga and the PC, with products from the likes of Borland and Microsoft, the new Basics are fast, powerful - and still the easiest languages to learn and use.

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